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L'IMPACT DE L'ACTIONNARIAT FAMILIAL SUR LA STRUCTURE DU CAPITAL, LE COÛT DE DE LA DETTE ET LA PERFORMANCE DES ENTREPRISES

ETUDES EMPIRIQUES DANS LES PAYS DE L'ASIE DE L'EST

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THE IMPACT OF FAMILY OWNERSHIP ON CAPITAL STRUCTURE, BORROWING COST, AND PERFORMANCE

EMPIRICAL EVIDENCE FROM EAST ASIA

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Thesis abstract

This dissertation examines the influence of family firms on leverage, cost of borrowing, and performance. The sample for the study is drawn from a selection of East Asian countries that have a variety of formal and informal institutional settings.

The dissertation consists of an introduction, a literature survey on family firms, three empirical essays, and a conclusion[1].

The first essay, entitled *"The impact of family ownership status on firm leverage. Empirical evidence from East Asia"*, investigates the impact of family firms on firm leverage in East Asia. We find consistent evidence that family firms have a significantly higher level of debt than nonfamily firms. The positive impact of family ownership on firm leverage is stronger in environments where creditor right protection is weak, and religion is more influent. The results are robust to alternative family firm classification and leverage measurements, and to inherent problems of ownership and leverage literature: endogeneity issues and time-invariant unobservable firm heterogeneity issues.

The second essay, entitled *"Family firms and the cost of borrowing. Empirical evidence from East Asia"*, investigates the impact of family firms on the cost of borrowing in East Asia. We find consistent evidence that family firms pay significantly higher loan spreads than nonfamily firms. This effect is stronger in environments with weak investor protection. Furthermore, covenants help reduce the cost of debt while collateral is embedded in relatively riskier borrowers. We also find that small, highly leveraged borrowers pay higher loan spreads, while they are lower for firms with more tangible assets and lower probability of default risk.

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[1] The first study is single authored, while the second and third are joint works with Christophe J. Godlewski. The second essay has been published in *Research in International Business and Finance*.

Our results survive several robustness checks related to family firm classification and endogeneity issues.

The third essay, entitled *"Family ties and firm performance. Empirical evidence from East Asia"*, investigates the impact of family ties on firm performance in East Asia. We build a proxy of family ties using objective and subjective measures of family ties taken from the World Value Survey. Our findings indicate that family firms with strong family ties exhibit superior performance relative to family firms with weak ties. In addition, family firms with strong familial relationships are likely to achieve a competitive advantage over nonfamily firms; meanwhile family firms with weak ties underperform nonfamily firms. Our results are robust in terms of alternative firm performance measures, family firm classification, heteroskedasticity, endogeneity and different econometric methods.

Overall, this thesis documents that family firms are different from nonfamily firms in many aspects from financing decisions to the cost of borrowing and performance. Our findings confirm that family firms are motivated by control power, evidence that they use more debt regardless of a higher cost of borrowing. Despite of borrowing more debt at a higher cost, not all family firms underperform to nonfamily firms. We find that family firms with strong family ties have superior performance than nonfamily firms. The findings imply that family ties, not just family involvement, create competitive advantage to family firms over nonfamily firms.

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List of Abbreviations

SEW	Socioemotional Wealth
GDP	Gross Domestic Product
OLS	Ordinary Least Square
IV	Instrumental Variable
RBV	Resourced-Based View
WVS	World Value Survey
SEM	Structural Equation Model
F-PEC	Family Power Experience Cultural Scale
CEO	Chief Executive Officer
FIBER	(1) Family control and influence;
	(2) Identification of family members with the firm;
	(3) Binding social ties;
	(4) Emotional attachment of family members;
	(5) *Renewal of family bonds to the firm through dynastic succession.*
M&A	Merger and Acquisition
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortization
2SLS	2 Stage Least Square
PPE	Property, Plan and Equipment
DWH	Durbin-Wu-Hausman
LIBOR	London Interbank Offered Rate

ROA	Return On Asset
ROE	Return On Equity
R&D	Research and Development
PSM	Propensity Score Matching

Attestation of Authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person (except where explicitly defined in the acknowledgements), nor material which to a substantial extent has been submitted for the award of any degree or diploma of a university or other institution of higher learning.

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Date: 13/02/2023

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Dedication

To my family, my parents, my children, my husband, and my brother's family

GENERAL INTRODUCTION

Family is one of the most basic elements of human history. And family business, the oldest and most fundamental institution, has been playing an important role in the long history of economic development. Indeed, history is full of impressive ascension of family firms, and even today most firms in the world are family firms. For example, La Porta et al. (1999) find that founding families control over 53% of the largest publicly traded firms in 27 countries. Additionally, the prominent role of families in large firms is reported by Anderson and Reeb (2003a) and Villalonga and Amit (2006) for U.S.; Faccio and Lang (2002) for Europe; Claessens et al. (2000) and Carney and Child (2013) for East Asia.

Family firms are distinctive from other types of firms. The unique nature of a family firm is overlapping between "family" and "business", making it more complicated as family is at the apex of governance. In particular, the most important governance decisions are commonly executed by a group of people who have blood or marriage relationships. Additionally, in contrast to nonfamily firms which are motivated by pure economic goals, family firms are typically motivated by, and committed to socioemotional wealth (SEW) (Berrone et al., 2012, Bertrand and Schoar, 2006). They are "risk averse" to losing "affective endowments", and willing to participate in risky activities to protect SEW, even if those strategic choices may jeopardize financial goals.

In response to the pervasiveness and uniqueness of family firms, the field of family business has evolved over the last three decades (Pindado and Requejo, 2015, Daspit et al., 2018). Despite of important insights drawn, the field remains challenging since modern corporate

finance literature is built on the assumption that firms are widely and dispersed held (Berle and Means, 1932, Jensen and Meckling, 1976). This assumption seems inadequate to deal with idiosyncratic issues of family firms (Chrisman et al., 2005, Chrisman et al., 2008). Therefore, research on family business still retains a strong phenomenological essence (Berrone et al., 2012).

While Western family firms have been largely investigated, relatively little attention has been devoted to Eastern family firms, observed that 73% of family business research focuses on North American and European family enterprises (De Massis et al., 2012). This creates a Western skew in current knowledge about family firms. Understanding family firms' behaviors in different institution settings therefore contributes to the generalization of family business literature.

The fact that family firms occupy the commanding heights of capitalism in East Asia, the world's most dynamic and emerging region, makes East Asia an important setting for studying family business. It is reported that more than half of the largest business groups are controlled by families. More details, the top 15 families control assets worth approximately 84% of GDP in Hong Kong, with corresponding figures of 76% in Malaysia, 48% in Singapore, and 47% in the Philippines (The Economist 2015). In Korea, the top 20 families control the huge conglomerates or *chaebols* that account for 60% of the country's stock market value.

Importantly, East Asia has been long-portrayed by co-residence and "strong" family ties, which are distinctive to Europe and North America (Goode, 1963, Reher, 2004). Put differently, East Asia is more family – oriented than West, suggesting that founding families are likely to play a more active role in business.

Furthermore, the Asian business landscape is also characterized by the informal nature of stakeholder relations, which is different from the Western business view. While globalizing, it is still persisting in unique institutional contexts (Steier, 2009). Despite of increasing similarities across nations within the region, each country still possesses its own unique history, culture, and socio-political environment (Sharma and Chua, 2013). Especially, religions which shape cultural values and influence individual behaviors are diverse in this region (Dinh and Calabrò, 2019). Carney and Gedajlovic (2002) show a compelling case that organizing principles in the Asian region differ significantly from *"orthodox Western practice"*.

Given the context of family business literature, one overall question which constitutes the main focus of this dissertation is: **whether family firms, especially East Asian family firms, are different from nonfamily firms**. In particular, the dissertation seeks to answer three related questions: rooted in a distinctive goal which is socioemotional wealth, how family firms' financing differs from nonfamily firms; whether family firms enjoy (suffer) a lower (higher) cost of borrowing; then finally given the financial strategy employed and the cost of debt, how family firms perform relatively to nonfamily firms, particularly whether family ties, an important feature of family, play any role in determining performance.

The dissertation is structured around 6 chapters including a literature survey and three essays, with an introduction and conclusion.

The first study, entitled **"The impact of family ownership status on firm leverage. Empirical evidence from East Asia"**, empirically investigates how family involvement influences the use of leverage. Interestingly, in the particular context of family firms, family owners become risk-seeking due to the threat of losing their SEW (Gómez-Mejía et al., 2007). In

other words, family firms exhibit loss aversion of SEW rather than risk aversion in determining financing decisions (Pindado et al., 2015, Keasey et al., 2015). Contrary to nonfamily firms, family firms pursue both economic and noneconomic goals (Berrone et al., 2012), but above all, to achieve these objectives, founding families need to perpetuate the control of the firm; and given that context, debt can be an effective tool to raise capital without ownership dilution. The control over strategic decisions of founding families is the key characteristic that distinguish family firms from nonfamily firms (Chua et al., 1999, Schulze et al., 2003).

Agency theory, one of the most predominant frameworks in capital structure literature, predicts competing relationships between family firms and leverage. On the one hand, the agency costs of managers and shareholders are less severe in family firms (Jensen and Meckling, 1976), therefore, the incentives of using debt to reduce the agency costs are less pronounced. Consequently, family firms may use less debt than nonfamily firms. Principally, managers are often affiliated to founding families in most family firms and, for that reason, the conflicts of interest between managers and family shareholders are naturally mitigated. Even with outside managers, family owners can still able to interact and monitor effectively due to superior knowledge of firm affairs derived from direct involvement in firm activities (Anderson and Reeb, 2003a). In addition to low agency costs, pursuing long-term management approach and being large, undiversified block holders, family firms are more risk averse (Anderson and Reeb, 2003b).

On the other hand, the agency costs between controlling family and minority shareholders raise as main conflicts within family firms yet is disregarded by classic agency theory. Founding families, with superior information and management position, have high opportunities to expropriate minority shareholders' wealth (Demsetz and Lehn, 1985, Djankov

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et al., 2008b). Especially, the separation of control from cash flows rights in most family firms allow family owners to bear a little equity but carry larger control rights, increasing incentives to expropriate minority shareholders (Claessens et al., 2000). Therefore, family firms have greater motives in using debt to enhance control power of private interests.

We argue that the risk of expropriation is especially high in East Asia, where the legal protection of investors' rights is weak (La Porta et al., 1998). In addition, we argue that family firms are motivated by perpetuating control power to protect SEW endowments. Indeed, control maintenance is an essential condition to generate and preserve socioemotional wealth, as control is what allows the family to pursue its interests through the firm (Zellweger et al., 2012). Prior research shows that control and influence are highly desirable socioemotional wealth to family members in any firm's affair (Zellweger et al., 2013, Berrone et al., 2012). Furthermore, given that religion in East Asia is very influential within society (Clobert, 2020), founding families are even more risk averse of losing SEW preservation (Shen and Su, 2017). Therefore, we expect that in the context of weak legal investor protection institutions and religion diversity, family firms have a greater incentive to maintain control power to fulfill both their socioemotional wealth and financial objectives; consequently, family firms borrow more debt than nonfamily firms.

To investigate the question whether family firms borrow more than nonfamily firms, the first essay includes 872 non-financial firms that cover the time span from 2000 to 2017 in eight East Asian countries consisting of South Korea, Hong Kong, Taiwan, Malaysia, Thailand, Singapore, Philippines, and Indonesia. The main estimation method applied in this analysis is pooled ordinary least square (OLS) regression, in which the dependent variable is long-term market leverage ratio as a proxy of capital structure. The main explanatory variable of interest is

the family firm status, a dummy variable which equals 1 if a firm is a family firm, otherwise 0. In addition to OLS estimation, I employ the two-stage least squares instrumental variable (2SLS IV) approach to alleviate potential endogeneity problem. I find consistent evidence that family firms borrow more than nonfamily firms. Furthermore, the positive impact of family firms on leverage is stronger in the context of weak investor right protection and more religious influence. Overall, my results confirm that motivated by control power, family firms use more debt, an effective tool to enhance control maintenance without diluting ownership, than nonfamily firms.

Next, we investigate whether family firms experience a higher or lower cost of debt. The second study[2], entitled **"Family firms and the cost of borrowing. Empirical evidence from East Asia"**, examines the relationship between family firms and the cost of external debt financing.

Theories provide competing predictions about the relationship between family ownership and the cost of debt. Under a resource-based framework, family firms are considered more advantaged in firm-creditor relationships. Particularly, family firms are able to nurture long-lasting relationships with banks (Cucculelli et al., 2016, Ellul et al., 2007), that reduce the cost of asymmetric information. With a long-term survivorship goal and reputational concerns, family firms are less likely to strategically default (Anderson et al., 2012), reducing the risk creditors face. In addition, as undiversified and large block holders, founding families have a lower preference for risky high-growth investments (Carney, 2005), they, therefore, are in alignment with creditors' interests (Anderson et al., 2012). Consequently, family firms may enjoy a lower cost of debt.

However, major literature reports that family firms are characterized by a preference for private interest of control (Burkart et al., 2003), high capacity of expropriating minority shareholders and outside investors' wealth (Djankov et al., 2008b, Claessens et al., 2002), and more opacity (Anderson et al., 2009, Chen et al., 2014), particularly in countries with weak investor protection (Ellul et al., 2007, Djankov et al., 2008a, Lins et al., 2013). These are negatively perceived by creditors and may cause a higher cost of external finance for family firms (Ferri and Murro, 2015, Berger and Udell, 2006).

We argue that due to weak legal and institutional environments in East Asia, creditors bear higher risk when lending to family firms. Indeed, weak legal protection of investors' rights facilitate expropriating minority shareholders' wealth (Claessens et al., 2002, Villalonga and Amit, 2006). Furthermore, the risk of tunneling and manipulating by dominant shareholders in debt restructuring process is high (John et al., 2003, Gilson, 2005, Jiang et al., 2010). It is also reported that the opacity caused by the entrenchment effect from family management increases information asymmetry problems (Murro and Peruzzi, 2019, Ma et al., 2017); as a result, creditors face more asymmetical information when dealing with family firms (Anderson et al., 2009, Chen et al., 2008). Therefore, creditors negatively perceive the role of founding families in business (Aslan and Kumar, 2012); in turn, it leads to a higher cost of debt for family firms to compensate for risky borrowings.

On the other hand, we concede that religion is likely to positively relate with higher ethical standards and can play a key social role to constrain opportunistic behaviors of managers (Weaver and Agle, 2002, McGuire et al., 2012, Grullon et al., 2009). Family firms in more religious societies are likely to produce less risk of opportunistic behaviors derived from management. Specifically, the risk of engaging in fraudulent activities that jeoperdize the wealth

of the debt holders is lower in the context of higher ethical standards and strong self-discipline (McGuire et al., 2012). This reduces the agency costs between creditors and family firms.

It is true that family business assigns "different weights for different logics across different circumstances" (Soleimanof et al., 2018, p.10). However, we argue that in the multiple or even conflicting logics between state-logic – formal institutions, and religion-logic – informal institutions, creditors with conservative perspectives are likely to skew the negative impacts of family involvement, which are fostered in environments with weak investor protection. The explanation is that while laws are equally effective to all firms and organizations, ethical norms are more specific to the circumstance faced by their members (Sinclair, 1993) or depend on the deductive analogy (Mansour et al., 2015). Therefore, family firms are perceived as riskier borrowers from the perspective of creditors; consequently, they suffer a higher cost of debt.

To test our hypothesis, we use ultimate ownership data of firms from Carney and Child (2013), accompanied with loans data from DealScan. We end up with 1,463 loan contracts from 2000 to 2017. The main estimation method applied in this analysis is OLS regression, in which we use natural logarithm of loan spread to gauge the cost of debt. The main explanatory variable of our interest is the status of the family firm. To further address the endogeneity issue due to the presence of omitted variables that may affect both loan spreads and family firm status, we apply a two-stage instrumental variable (IV) estimation. We find consistent evidence that family firms pay significantly higher loan spreads than nonfamily firms. The positive relationship is stronger in a weak investor protection environment.

Finally, we investigate how family firms perform with respect to nonfamily firms. Contrary to previous studies on family business performance which primarily distinguish family

firms from nonfamily ones, we focus on family ties, a unique factor available only to family firms. Indeed, family ties cannot be imitated or acquired in strategic factor markets (Barney, 1986). In addition, focusing on family ties help us to isolate the effect of family from effects of managerial or concentration ownership which also exist in other forms of business. The third essay, entitled **"Family ties and firm performance. Empirical evidence from East Asia"**, therefore investigates the impact of family ties on firm performance.

Agency theory predicts family firm performance from the perspectives of principal-manager agency costs and controlling family-minority shareholder agency costs. However, the conflicts between family members which are central and inherent among only family firms are missed. It is undeniable that relationships among family members influence family members' behaviors (Alesina and Giuliano, 2014). They can generate a lower agency cost due to higher trust among family members and common family goals; but they may also produce a higher agency cost due to the fact that family firms may have to incur expenses related to dealing with family conflicts, or suffer from free riders who are irresponsible for the value of firm (Dyer, 2018, Hoffman et al., 2006).

Together with agency theory, the resource-based view (RBV) is a predominant theory in family business. Under the RBV framework, family firms generate unique resources/assets in various forms such as human resources (i.e., family members are highly motivated, loyal, and well trained), social capital (i.e., family members use their inside/outside social connections and contribute to a firm's business), and physical/financial capital (i.e., family members use personal assets to support the business) (Chua et al., 1999, Carney, 2005, Dyer, 2006). These resources provide family firms with a competitive advantage over nonfamily firms. However, family firms

also have specific problems, such as unprofessional management due to nepotism, kinship, or distrust outside family members, which threaten their values (Dyer, 2006).

It is acknowledgeable that the most unique characteristic of family businesses is the interaction of two conflicting systems: a family system relied on norm, values and altruism, and in contrast a business system relied on rational, economic principals. There is, consequently, a large room for emotions which are considered irrational in business. Indeed, prior research has shown that family firms pursue socioemotional wealth goals even at the expense of financial outcomes (Gómez-Mejía et al., 2007). However, both the agency theory and the RBV applied to family business are primarily based on the assumption that firms pursue economic principles, while family firms focus on noneconomic objectives. This leads to ambiguous conclusions in family business studies. To shed a light on the effect of family on firm performance, or more particularly, on the family feature contributing to firm performance, we integrate family capital theory with agency theory and RBV in explaining family firm performance.

Family capital theory provides an insightful view from a family perspective to explain why and how competitive advantage is created in family firms. Hoffman et al. (2006) suggest that "family businesses with high levels of family capital possibly do hold a sustained competitive advantage over family businesses with low levels of family capital and/or businesses" (p.135), and importantly, family ties provide environment for fostering and nurturing family capital. By integrating this theory with agency theory and RBV, we argue that family firms with strong family ties can generate higher performance relative to nonfamily firms; in opposition, family firms with weak family ties do not have a competitive advantage over nonfamily firms. The central argument is that family firms with strong family ties face lower agency costs due to common goals and core values (Nahapiet and Ghoshal, 1998) and produce

more unique sources for creating a competitive advantage such as reputation and long-standing relationships with other stakeholders (Burt, 2009, Gomez-Mejia et al., 2001). Contrastingly, family members with weak connections are likely to have competing goals and a lack of family values as a benchmark (Lansberg, 1999). As a result, the conflict between family members is high, creating high agency costs. In addition, an environment of weak family ties is unable to foster the high level of trust or to create family language.

Following prior studies (Alesina and Giuliano, 2010, Alesina and Giuliano, 2014, Marè et al., 2020), we use the World Value Survey to measure the strength of family ties. The third study includes 872 non-financial firms that cover the time span from 2000 to 2017 in eight East Asian countries. We use pooled ordinary least squares (OLS) regressions as a baseline model in our analysis. To capture dynamic relationships between family firm, firm strategies, and performance, in addition to OLS estimation, we employ structural equation model (SEM). In addition, we apply propensity score matching (PSM) approach and two-stage instrumental variable (IV) estimation in our analysis to address the endogeneity issue due to the presence of omitted variables that may affect both family ties and firm performance. Our main findings show that family ties are important factors influencing firm performance. Compared to family firms with weak family ties or nonfamily firms, family firms with strong family ties exhibit superior performance. On the contrary, family firms with weak family ties generate the lowest performance. The results suggest that family firms with strong family ties create competitive advantage, while family firms with weak family ties are unable to create competitive advantage over nonfamily firms. The weak familial relationships even make family firms underperform relative to nonfamily firms. The results reflect the variant impact of family involvement on

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performance. Our results are robust in terms of heteroskedasticity, alternative performance measurements and proxies for a family firm, and different econometric methods.

In sum, this thesis reports that family firms have a greater incentive to enhance control power, evidence that family firms use more debt, an effective tool to raise capital without ownership dilution, than nonfamily firms. Our argument is strongly confirmed when the results show that a higher level of debt among family firms is not derived from benefits of a lower borrowing cost. They even suffer a higher cost of debt compared to nonfamily firms. Findings support argument that family firms pursue economic and noneconomic goals, particularly, family firms are "loss averse" of losing SEW endowment. They are likely to engage in risky activities to protect their socio-emotional wealth even at the expense of financial outcomes. In addition, our findings show that with strong familial relationships, even following high leverage strategy at a higher borrowing cost, family firms still outperform nonfamily firms. However, weak family ties may harm firm value. Therefore, family ties are an important factor of a family firm in determining firm performance.

Our thesis contributes to family business and finance literature in several ways. First, generally, we enrich family business literature by adding new lens of Asian family firms to western skew in the current knowledge about these firms (Sharma and Chua, 2013). Indeed, in East Asia, the world's fastest-growing area, family firms are not only the dominant but also a long-lasting organizational form (Claessens et al., 2000, Carney and Child, 2013, The Economist 2015), but the number of studies on 'Asian' family firms is still limited, observed that less than 30% of them focus on the East (De Massis et al., 2012, Sharma and Chua, 2013). In addition, the contextual environment in East Asia is unique, revealing a convergence – divergence paradox (Steier, 2009). It is globalizing, whilst persisting with unique institutional contexts. The informal

nature of stakeholder relations plays an important role in the Asian business landscape, which is different from the Western business view. Therefore, it is worth to better understand the contextual nuances of the Eastern region to add new knowledge about family firms around the world, contributing to the generality of knowledge about family business.

Second, more specifically, we enrich family business literature by focusing on the unique feature that distinguishes family firms from nonfamily firms, that is family ties. Previous empirical studies comparing performance of family firms versus nonfamily firms have not explicitly identified the effect of *family* on performance (Dyer, 2018).[3] By distinguishing family firms with strong family ties from family firms with weak family ties, we capture the heteroskedasticity of family firms as well as the dynamic effect of family on firm performance. To our knowledge, this is the first study to investigate the impact of family ties on firm performance.

Third, following the growing area of finance literature which suggests that culture plays an important role in financial outcomes, we consider the cultural context, given that the informal institution plays a dominant role along with the formal institution in shaping the behaviors of individuals and organizations (Berrone et al., 2020). Given the influential and divergent religions and motivated by previous research (Dinh and Calabrò, 2019, Soleimanof et al., 2018), we take religion into account as an important cultural factor that can affect firms' activities. Dinh and Calabrò (2019) argue that studying family business in Asia should look further into the religious elements since family firms have great incentives in pursuing socioemotional wealth (SEW) (Gómez-Mejía et al., 2007, Jiang et al., 2015) and religion may serve as a key driver of SEW.

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[3] A notable exception is GOMEZ-MEJIA, L. R., NUNEZ-NICKEL, M. & GUTIERREZ, I. 2001. The role of family ties in agency contracts. *Academy of management Journal,* 44**,** 81-95.

Soleimanof et al. (2018) suggest that studying family firms in contrasting religious contexts provides better understandings of family firms. To our knowledge, this is the first cross-country study on family firms in East Asia to examine the effect of family ownership on leverage, as well the cost of the debt in the context of joint effect of formal and informal institutions.

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CHAPTER 1: FAMILY FIRM LITERATURE AND THEORETICAL FRAMEWORKS

1.1 Family firm

1.1.1 What is family firm?

Since Lansberg et al. (1988) asked the question 'what is a family firm?" for more than three decades ago, research on family business has not stopped blossoming. Given the challenges from practically complicated situations, for example a business is owned by a family but operated by nonfamily managers or a business is owned by a large, multinational corporation but managed by a local family, scholars still debate on the definition of a family business. Over the years, researchers have made attempts to conceptualize a family business to reconcile different views. Dealing with miscellaneous definitions, Chua et al. (1999) provide important contributions to family business literature by pointing out the essence of a theoretical definition of a family business before developing an operational definition. They argue that the important character that distinguishes family from nonfamily firms is their behaviors. Therefore, they propose a 'vision' that dominant family coalition intentionally shape and pursue, and the potential sustainability of the vision to the transfer to next generations are important theoretical features that distinguish family from nonfamily firms:

"[A family firm is] governed and/or managed with the intention to shape and pursue the vision of the business held by a dominant coalition controlled by members of the same family or a small number of families in a manner that is potentially sustainable across generations of the family or families"

(Chua et al., 1999, p. 25)

Habbershon and Williams (1999) define "familiness" of a firm as a distinguishing factor to clarify family firms. More specifically, they describe familiness as the unique bundle of resources derived from the interactions between individual family members, the family unit and the business. In other words, to achieve the goal of transgenerational wealth creation, a family business creates competitive advantages via a vehicle which synergizes familial resources from divergent aspects such as human capital resources (skills, knowledge, training), social capital resources (relationships), and physical capital resources (plant, raw materials, location, cash, access to capital, intellectual property). The most important contribution from their studies is to provide an economic rationale for why family firms exist.

In parallel with the theoretical definition approach, the practical approach has developed with a wide range of definitions, based on the components of family involvement. Among this stream, Astrachan et al. (2002) provide a comprehensive operational instrument to measure family involvement in and influence on the business. They develop the Family Power Experience Culture Scale (F-PEC) to measure multiple elements of family involvement that includes three dimensions, namely power, experience, and culture. The core advantage of this component definition approach is the possibility to measure different level of family involvement and influence that affect firm behaviors (Chrisman et al., 2010). Despite its limited applicability in empirical studies since it does not capture the level of involvement to what extent family can execute their power to pursue the objectives (Rutherford et al., 2008), this definition provides a framework for an operational approach. We summarize below a range of definitions relying on the component approach following three dimensions of involvement including power, experience and culture proposed by Astrachan et al. (2002).

The first dimension, power of family which covers ownership, management and governance, is commonly used in family business studies (O'Boyle et al., 2012). Among these three elements of the dimension of family power, scholars often employ the fractional ownership of a family to identify a family firm, where most of the ownership or control belongs to a family. The ownership level of family captures the influence of family on business; however, it varies from country to country due to legal framework, culture, or regional understanding of family business. For example, Donckels and Fröhlich (1991) identify an enterprise as a family firm where family members own at least 60% of the equity. Meanwhile, Anderson and Reeb (2003a) identify a family firm when the founding family holds shares. Another alternative element of power used to identify a family firm is family involvement in management. For example, Handler (1989) identify family firm as "an organization whose major operating decisions and plans for leadership succession are influenced by family members serving in management or on the board" (p. 262). In addition, based on governance aspect, Dreux IV (1990) define family firms as "economic enterprises that happen to be controlled by one or more families (that have) a degree of influence in organizational governance sufficient to substantially influence or compel action" (p. 226).

Regarding the second dimension, experience, some scholars identify a family firm based on generations and the number of family members involved in the firm. For example, Donnelley (1964) identify a family business as following:

> *"A company is considered a family business when it has been closely identified with at least two generations of a family and when this link has had a mutual influence on company policy and on the interests and objectives of the family"* (p. 94).

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Taking different points of view, some researchers consider the culture of family firms as the third dimension. Family firms are defined by the commitment and overlap of family and business value. These firms are often described as "relying on mutual trust, intra-familial altruism in its purest sense (i.e., unselfish concern and devotion to others without expected return to oneself), and clan-based collegiality" (Corbetta and Salvato, 2004) (p.356)

Furthermore, many scholars define family business in multiple dimensions. For instance, Poza and Daugherty (2013) describe an enterprise as a family business if it meets these criteria: (i) two or more family members control at least 15% of ownership; (ii) family members are actively involved in management through being an active manager (board member or advisor) or active shareholder; and (iii) the probability of transgenerations is high. In addition, they suggest some elements to define family business: (i) the presence of family in the business, (ii) the combination of family, ownership and management makes family firm vulnerable in succession, (iii) the competitive advantage derived from the engagement of family, ownership, and management where the unity in family is high; and (iv) the owner's desire of business perpetuation in family.

Despite long-lasting efforts to conceptualize a family business, no jointly accepted definition within the family business research field has been found. O'Boyle et al. (2012) show this ambiguity: "Our search confirms this [a lack of consensus as to how to operationalize family involvement; author's note] as we identified over thirty definitions of family involvement across included studies." (p.8).

In a nutshell, the concept of family business is generally defined with two approaches, theoretical "essence based" definition and a sharper focused operational definition which relies on the "component of involvement" of a family in business (Sharma et al., 2014). While the

essence approach focuses on the understanding of family firms' behaviors and the consequences of this behavior, the component approach focuses on the family involvement in and family influence on business. It can be concluded that the essence approach provides theoretical understandings of family firms, meanwhile, component approach provides empirical instruments for assessing the family involvement and its influence (Chrisman et al., 2010).

Recently, scholars have reached an agreement on commonly accepted precise condition of a family business regarding the possession of voting rights and the involvement of family members in the governance of the firm itself (Colli et al., 2013). However, it should be noted that what is meant by a family business is a historical definition that depends on geography, chronological, and cultural orientation. Chrisman et al. (2005) suggest that ideally all researchers should start with a common family business definition and the more important thing is "[…] the definition of a family business must be based on what researchers understand to be the differences between the family and nonfamily businesses" (p.557).

1.1.2 Why family firms exist?

The history of business development has recognized the remarkable imprint of family business. Literally, "where there is humanity, there are family enterprises" (Sharma et al., 2014) (p.12). Indeed, family businesses played a predominant role in agrarian economies where labors were primary sources and economic activities were organized around families, one of the most primordial organizations. In the second stream of economic development, when rapid industrialization and large migratory waves from countryside to the city took place, family businesses contributed to the development of social classes and privileges. Nowadays, the increasingly important role of family businesses in the world economy is undeniable. Admittedly, family firms are present in all spheres of the economy from the home-based

business to the large multinational corporations. The prevailing existence of family businesses worldwide raises the question of which rationales are behind this prevalence. There are many determining factors supporting the prevalence of family businesses; in general, we can classify them into three main streams.

The first is attributed to the competitive advantages created by the familiness derived from the combination of family members, family unit and business. Many scholars consider families themselves as distinct sources of rare and valuable resources which in turn can generate family-specific competitive advantages, and consequently lead to superior organizational performance (Habbershon et al., 2003). More importantly, these resources are inimitable and nonsubstitutable by nonfamily firms, which leads to sustainable competitive advantages for family firms. One of the most important advantageous resources attached to family involvement is family social capital, which is inextricably tied to organizational social capital (Arregle et al., 2007). The longitudinal reputation of families can stand as a guarantee of organizations due to the view of family business as part of founding families. Furthermore, the long-term management approach through family multi-generations creates competency that helps them to foster and nurture enduring and broad-based relationships with external stakeholders.

The second is rooted in economic benefits which founding families can earn via expropriation of minority shareholders (Demsetz and Lehn, 1985, Gomez-Mejia et al., 2001). This expropriation can lastly incur due to the managerial entrenchment when a controlling family shareholder is capable to hold senior executive office for endless period without being impacted by his or her performance. Extended executive tenures facilitate family-managers to employ various devices to benefit controlling families, namely pyramids created by family owning a chain of organizations (Morck and Yeung, 2003), tunneling, expropriating cash benefits between

subsidiary organization (Bertrand et al., 2002) and transactions with family-connected parties (Cheung et al., 2006). For example, founding families can distract scares resources in publicly controlling firms to private firms by selling assets or products of the controlling firm at a favorable price to a private firm, commonly known as 'transferring price'.

The third is emotional bonding (Berrone et al., 2012). Socioemotional wealth is an important noneconomic goal family firms pursue. This objective is based on the individual's self-concept of belonging to a social category (Tajfel, 1982), including authority, satisfaction, need to belong to, preservation of the family dynasty and the fulfillment of family obligations (Gómez-Mejía et al., 2007). Family members often identify the business as part of their life and a place they dedicate most of the life to. Furthermore, the founder of a firm has some nonpecuniary happiness when observing their children in managing the firm under family's name. Other reasons related to emotional bonding are trust and commitment. Davis et al. (2010) show blood is indeed thicker than water, evidence that family member employees perceive higher value commitment and trust than nonfamily members. Similarly, prior scholars show the role of trust and commitment as important factors for the long-term survival of family businesses (Steier, 2001, Koiranen, 2002).

1.1.3 What makes family firms unique?

The overlap between family system and business system

The most unique feature that distinguishes family firms from nonfamily firms is the reciprocal influence of family and business. In other words, a family business is rooted in two systems: (1) family, a normative system based on norms, values, and altruism; and (2) business, an utilitarian system based on rational, economic principles (De Vries and Carlock, 2010).

Ironically, emotions which are naturally central in a family system are considered as irrational and should have no place in a business system (Whiteside and Brown, 1991). In the early days of family business literature, the family system is portrayed as negatively interfering with business due to its emotive sides. Therefore, many scholars propose the separation of family and business systems to prevent mixing emotional and rational arenas so that emotions do not interfere negatively with the business (Whiteside and Brown, 1991, Hollander and Elman, 1988).

However, efforts to draw a frontier between two systems of family and business seem unachievable because the two systems are naturally permeable (McCollom, 1988). Obviously, a founder is part of his business and is also part of his family. The natural integration of family and business leads to common consequences that issues belonging to family are likely dealt with as a business issue, and issues belonging to business are dealt as family matter (Davis and Stern, 1988). In fact, the most important governance decisions are typically executed by a group of people who have blood or marriage relationships. Another example is family dinners are places to discuss business issues, and board and management meetings are places to discuss the future of family members.

In short, a family firm is an integrated system of family and business which are incompatible but intertwined with each other in a natural way. In turn, the context of hybrid organization where family members identify business as a place they belong to and part of their identity leads to differences in behaviors of family firms versus nonfamily firms.

The noneconomic goals

The family system enduringly grows in its own way and is naturally permeable to the business system. Undoubtedly, the utilities derived from family business are to serve the welfare of family. Therefore, family goals are spontaneously integrated into business. More importantly,

in turn, these goals, known as noneconomic goals, idiosyncratically influence family firms' behaviors; and consequently firm performance (Carney, 2005, Gómez-Mejía et al., 2007, Gomez-Mejia et al., 2001). The noneconomic goals of families, conceptualized as "socioemotional wealth" or "affective endowments" that broadly capture the stock of affect-related values including the unrestricted exercise of personal authority vested in family members, the satisfaction of influence over the family business, and linkage of family firms to family members as their identification, are derived from three main noneconomic aspects of family business (Gomez-Mejia et al., 2011).

The first and most obvious recognition is emotional bonding. Naturally, families as a social group with long-lasting histories and memories have a variety of emotions, from warmth, intimacy, tenderness, love, consolation, and happiness to hatred, jealousy, ambivalence, and anger (Epstein et al., 2003). Therefore, defining the business as part of their identification and a place they belong to leads family firms to pursue goals to fulfill emotions of family members. The attachment business to family identity means that personal pride and self-concepts of family members become crucial to the business. Consequently, to satisfy family members' emotions, the control over the business becomes the first-condition important source, even more important than financial outcomes (Schulze et al., 2001). In other words, family firms are willing to take risky activities to protect control power even at the expense of financial outcomes.

In addition to emotions, the desire to infuse family values into the business as the springwell of organizational culture is a distinguishing factor of family firms (Dyer Jr, 2003, Habbershon and Pistrui, 2002, Gomez-Mejia et al., 2011). In any social system, values provide guidelines that help participants determine what is important. In particular, in the context of family firms as a social system where values of family and business are integrated, values of

family shape the values of business (Sorenson, 2014). For example, Aronoff (2004) emphasizes "the importance of family values as the culture of the pillars of the family business. . . enabling the company to be differentiated from other enterprises." (p.57). Similarly, Astrachan et al. (2002) show that family firms whose family values present strongly in the business develop a distinct organizational culture.

The third noneconomic aspect of family firms is altruism. The altruistic behaviors are rooted in the desire to preserve the welfare of the family unit. Altruism often exists when founders feel satisfied to give favor to family members due to blood ties. The treatment of family employees based on familial relationships rather than on their capacity or competency becomes paramount in family business (Gomez-Mejia et al., 2011, Miller et al., 2007). It is evident that in family firms, management entrenchment, which reduces sensitivity to excessive risk taking or to poor performance, is normally a result from contracts assigned by emotion-laden familial relation (Gomez-Mejia et al., 2001).

Broadly, the noneconomic aspects of family lead family firms to pursue "socioemotional wealth" (Gomez-Mejia et al., 2011, Miller et al., 2007, Dyer Jr, 2003, Sorenson, 2014). Furthermore, researchers show that the desire to preserve and enhance family socioemotional wealth becomes primary goals of family firms; therefore, family owners consider potential gains or losses in socioemotional wealth as a reference in strategic management choices. In particular, when there is a threat to socioemotional wealth, the family is willing to put the firm at risk to preserve that endowment.

1.2 Theoretical framework

1.2.1 Agency theory

In the seminal article, Jensen and Meckling (1976) identify two types of conflicts.

The first is conflicts between shareholders and managers, usually known as Type I agency cost, arising from the separation of control and ownership in a corporation. Managers are likely to transfer firm resources to their own, personal benefit rather than attempt to do the best for residual claimants who are not them. For example, they may enjoy "perquisites" such as corporate jets, plush offices, building "empires," etc. at the firms' expense and invest less effort in managing firm resources. In addition, in this economic relationship, the managers are assigned to manage the capital for owners following owners' delegation and instruction, therefore the owners have to monitor results of the managers' activities as well as behaviors of the managers (Eisenhardt, 1989, Jensen and Meckling, 1976). During doing these activities, the owner may be not fully aware of what the manager has done, either due to different interests or unaccurate determination of the manager capacities. This may lead to moral hazard and adverse selection. The former occurs when the managers do not put their effort to fullfil the assignments given to them. The later araises when the owner assign a "wrong" manager to do the tasks because of misstatement about manager capacities.

The second is conflicts between debtholders and owners, usually known as Type II agency cost, arising since the debt contract provides owners an incentive to invest in suboptimal projects. More specifically, owners enjoy the unlimited gain when an investment yields large returns above the face value of the debt. If, however, the investment fails, owners bear the loss only up to limited liability. Therefore, owners have incentives from "going for broke," i.e., investing in very risky projects, even if they are value-decreasing. Consequently, suboptimal projects decrease the value of the debt. Another noticeable agency cost between owners and debtholders is shed light by Myers (1977). He argues that when firms have a high probability of

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going bankrupt in the near future, owners may have no incentive to contribute new capital even value-increasing projects are available. This issue appears since owners even bear the entire cost of the investment while the returns from the value-increasing investment are mainly delivered to the debtholders. Therefore, firms with high debt levels are likely to reject more value-increasing projects.

Put above conflicts into the context of family firms, Jensen and Meckling (1976) has substantially contributed to the study of family firms. Exceptionally, they argue that the concentration of ownership reduces the principal-agent problems (Type I agency cost), therefore increases the value of a firm. Correspondingly, family firms have less severe agency costs than nonfamily firms, leading to better performance. Naturally, the conflicts of interests between managers and shareholders are mitigated in most family firms since CEOs are affiliated with controlling families, leading to an alignment of interests that reduce the monitoring costs and additional perks (Jensen and Meckling, 1976). With superior knowledge derived from daily business activities, family owners are able to effectively monitor managers, even with outside CEOs (Anderson and Reeb, 2003a). Furthermore, as the members of founding family, managers are expected to have endless time to lead the firms; consequently they dedicate efforts to fulfill the firm's goals, decreasing moral hazard. Also, adverse selection is reduced since the family owners have insight judgment about the managers' capabilities.

Regarding Type II agency cost between owners and creditors, family firms have less risk of asset substitution since as block holding and undiversified investors, family owners are less likely to pursue risky investments, which is aligned with creditors' interest (Carney, 2005). In addition, with objectives of transgenerational continuity, family reputation (Berrone et al., 2010) and social capital (Arregle et al., 2007), family firms are likely to comply more with debt

commitments. Furthermore, from the view of considering a family firm as a galaxy to pass to next generations, family members provide "patient capital" to firms and are less likely to strategic default (Bertrand and Schoar, 2006). The asymmetric information borne by creditors is reduced in family firms due to the long-lasting closer relationship between family firms and creditors (Cucculelli et al., 2016).

Undeniably, agency theory has contributed remarkably to family business literature. Knowledgably, much of the family business literature under agency theory framework at least implicitly assume that family firms have less agency costs than nonfamily firms, consequently, contributing positively to firm performance. However, that may not always be the case (Morck and Yeung, 2003). The critical point is that the classic agency theory has not captured the conflicts of interest between family and nonfamily shareholders as well the conflicts among family members.

Morck et al. (1988) are the first to shed light on the potential agency problems between controlling family and minority shareholders. They argue that agency cost raises when controlling family shareholders have varying capacities to extract private benefits at the expense of minority shareholders. In addition, Morck and Yeung (2003) focus on the costs rather than the benefits family firms bring to organization, drawing the immense attention of family business scholars to some of the characteristics of the governance structures within family firms. They argue that in economies where large family groups are dominant, family firms are often organized in pyramidal structures. In turn, these structures facilitate increasing agency problems such as entrenchment, moral hazard, and tunneling. Similarly, La Porta et al. (1999) point out that owner-owner agency problems are relatively greater than owner–manager agency problems in large family firms around the world.

Furthermore, Schulze et al. (2001) introduce the concept of altruism and self-control into family business study. They argue that classic agency theory framework developed by Jensen Jensen and Meckling (1976) have not captured the agency problems caused by family members. Particularly, they report evidence that agency problems still considerably exist even in family firms with concentrated ownership and management. Schulze et al. (2003b) show that conflicts among family members lead to overinvestment or free riding issues. They argue that conflicts among family members become most severe when a small number of family members hold roughly equal proportions of shares, as is typically the case in sibling partnerships. In addition, family members with different views of ownership distribution, compensation, risk, and responsibility may have competing goals (Schulze et al., 2003a, Faccio et al., 2001). Also, family members whose ownership is minor can free ride on the controlling owners' equity.

To sum up, in the context of family business, the agency theory suggests that in general, because of, or in spite of, altruistic tendencies (Schulze et al., 2001), the agency cost between owner-manager is lower compared to nonfamily firms (Jensen and Meckling, 1976, Chrisman et al., 2004). The advantage of potential low agency cost within family firms is even enhanced by family social capital (Carney, 2005). However, agency problems related to owners can lead to managerial entrenchment or excessive risk aversion; as a result, the advantage of low agency cost can be mitigated (Gomez-Mejia et al., 2001). Notably, although from a firm performance point of view, performance reduction is much larger due to owner–manager agency problems than due to owner–owner agency problems (Anderson and Reeb, 2003a), the later agency cost can become more important especially when ownership dispersion is equal among a few family members or succession is imminent (Schulze et al., 2003a, Schulze et al., 2003b). Particularly, in regions where minority shareholders rights are protected by weak legal protection system, the

owner–owner agency issues may raise as an important concern (La Porta et al., 1999, Morck and Yeung, 2003).

1.2.2 Resourced – based framework

The resource-based view (RBV), promulgated by Barney (1991), is one of the most dominant paradigms in firm strategic management study. The RBV emphasizes that distributing heterogeneously and moving imperfectly resources across firms can lead firms to gain sustained competitive advantages without being eroded by competition over time. Barney (1991) identifies three types of resources (physical capital, human capital, and organizational capital) and four features of resources that make them become sustainable competitive advantages: (a) valuable for implementing a strategy that helps enhancing the efficiency or effectiveness of a firms, (b) rarity compared to the resources possessed by other firms, (c) competitors are unable to perfectly imitate the resources to implement a strategy, and (d) an absence of resources substitution so that competitors are unable to implement the same strategy.

Habbershon and Williams (1999) extend RBV in the context of family business by introducing the concept of "familiness". "Familiness" is "the unique bundle of resources a particular firm has because of the systems interaction between the family, its individual members, and the business" (p. 11). In other words, the integration of the family and the business system can become a potential strategic resource that family firms can use to create competitive advantages. Indeed, families themselves are sources of valuable, inimitable, and non-substituable resources which in turn can lead to sustainable competitive advantages and consequently to a superior organizational performance (Habbershon and Williams, 1999, Habbershon et al., 2003).

Under RBV framework, family firms can be more advantaged than nonfamily firms in various forms of social capital, human capital, patient financial capital, survivability capital and governance structure and costs (Sirmon and Hitt, 2003). Regarding social capital, family firms are more advantaged in building social connections due to the ability of fostering and nurturing long-standing relationships across generations of a family (Dyer, 2006, Carney, 2005). Stakeholders prefer embedding personal relationship with family since commitments made by a family are likely to be more enduring and trusted than by nonfamily and myopic managers of nonfamily firms. Additionally, transaction cost is low and information flows are more effective, especially for private information due to close relationships with high level of trust in family firms (Lin, 2002, Tagiuri and Davis, 1996, Daily and Dollinger, 1992). Regarding human capital, family-oriented workplace makes employees more inspired and loyal (Ward, 1988, Ward, 1997). As family name is "on the building", family members are more flexible to work long hours in order to help the firm succeed (De Rosenblatt et al., 1985). In terms of financial capital, family firms are more advantaged as family members are more willing to provide a low cost and "patient" capital which derives from the longevity perspective of the business through generations and the long-term financial security protection (Dyer Jr, 2003, Aronoff, 2004). Sirmon and Hitt (2003) assert that "survivability capital" can provide competitive advantages to family firms over nonfamily firms during poor economic times, especially after an unsuccessful extension or new market venture. The last form of capital is governance structure. According to Carney (2005), there are three unique attributes of family governance: parsimony, particularism and personalism. Parsimony means family members are less opportunistic since they make decisions about their own money. Particularism is the ability of family firms to acquire certain types of resources since they can apply particularistic decision criteria without constraints

derived from unification of ownership and control. Personalism means family members have more freedom to impress oneself in business because they are not subject to norms of shareholders wealth maximization. With these characteristics, family firms are able to compete especially in environments of scarce resources, social capital utilization, and opportunistic investment engagement, contributing to firm value creation.

Among these advantageous capitals, social capital is considered as a primary competitive advantage of a family firm (Arregle et al., 2007, Pearson et al., 2008, Rau, 2014). Arregle et al. (2007) propose a model of "family social capital's influence on the development of organizational social capital" (p.73). They use the context of family firms in which at least two groups are present, namely family and nonfamily members, and the potential conflicts of two groups to portray environment in which "inter-group heterogeneity and intra-group interaction within family are identifiable and may strongly influence the firm's organizational social capital" (p.75). They argue that organizational social capital is shaped by a dominant group within an organization, here a family group. Indeed, social capital in family firms is more durable than in nonfamily firms since they are built on the background of long history of families with norms and values created across generations. In addition, these connections are rooted in a high level of trust and commitment. Family social capital flows to organizational social capital in various ways from the influence of family on organization to decisions with strong remarks of family owners to criteria of employee and manager selection. Last but not least, family members can embed personal networks which are accumulated from long-standing relationships into business, which rarely exist in nonfamily firms.

Although RBV is compelling to apply in family businesses, this theoretical framework still has some drawbacks. First, besides the promising influence of familiness, the negative

potential of familiness also exists but is widely ignored (Rau, 2014). Some characteristics associated with familiness such as nepotism, lack of professionalism, feuding families may bring up to the firm disadvantages. In addition, even if resources are positive factors, they can become negative in other cases. An example for this case is trust or sibling rivalry or financial resources scarcity. In other words, RBV has not captured the dynamic of family firms and not pointed out under which circumstance familiness becomes an asset or a liability. Second, RBV provides a framework of resources reference under the assumption that firms maximize financial wealth, while family firms pursue noneconomic goals, named as socioemotional wealth. Put differently, pursuing noneconomic goals that might lead to distinctive or constrictive family firm resources is still unanswered under RBV framework (Habbershon et al., 2003, Sirmon et al., 2008). For example, as suggested by Chua and Schnabel (1986), if noneconomic goals of family firms is transgenerational wealth creation, family firms are likely to focus on long-term orientation; consequently, family members are willing to contribute to financial capital at a lower cost and to invest patient capital in innovations with less certainty (Zellweger, 2007), creating competitive advantages. In contrast, pursuit of transgenerational wealth creation might also cause conservative and myopic behaviors of family if such investments are anticipated to threaten their ability to maintain transgenerational control (Gómez-Mejía et al., 2007).

1.2.3 Socioemotional wealth

Both agency theory and RBV are valuable and influential theoretical frameworks in family business literature. However, they are still challenged by unique characteristics of family firms. Since these dominant theories are borrowed from other domains, primarily financial economics, and strategy management where the main assumption is that corporations are highly dispersed held and economic goals are primary objectives; these "foreign paradigms" seem not

adequate in dealing with the uniqueness of family firms. Therefore, family business scholars call for their own theory in their own home "family business" (Chrisman et al., 2005, Chrisman et al., 2008). In respond to this need, Gómez-Mejía et al. (2007), Berrone et al. (2010) and Gomez-Mejia et al. (2011) propose a new "homegrown" theoretical framework grown from the family business field, namely the socioemotional wealth (SEW) model. First conceptualized by Gómez-Mejía et al. (2007), SEW is actually based on longstanding legacy of this concept and the importance of noneconomic goals to family firms that has been acknowledged (Daily and Dollinger, 1992, Tagiuri and Davis, 1996). The authors argue that "SEW is the most important differentiator of the family firm as a unique entity and, as such, helps explain why family firms behave distinctively" (p.258).

Simply put, the SEW model suggests that family firms are risk averse to loss of SEW, meaning they are willing to sacrifice financial outcomes to protect SEW. In other words, family firms are assumed to be motivated by, and committed to, the conservation of their SEW endowment, not financial wealth. In this model, preservation, and enhancement of SEW are considered as the crucial frame of reference for family firms in making major strategic choices and policy decisions. Indeed, the SEW model has been increasingly applied in family business studies (Deephouse and Jaskiewicz, 2013, Zellweger et al., 2013), in which researchers primarily seek to understand which underlying reasons lead family businesses' behaviors versus nonfamily businesses.

Typically, it is believed that family firms apply homogeneously the SEW logic; however, some researchers debate that family firms are heterogeneous. Notably, SEW is an all-encompassing approach that captures a wide range of variety of "affective endowment" of family owners, from desire to exercise authority of family owners, enjoyment of influence in

business, maintenance of clan membership within the firm, assignment of trusted family members to important posts, retention of a strong family identity, continuation of the family dynasty, and so on (Gómez-Mejía et al., 2007). Therefore, by its very nature, SEW includes multiple dimensions. Consequently, different features of SEW lead to different family businesses to select different strategies. Berrone et al. (2012) discuss and propose five major dimensions of SEW, namely "FIBER, which stands for (1) F*amily control and influence*; (2) I*dentification of family members with the firm*; (3) B*inding social ties*; (4) E*motional attachment of family members*; and (5) R*enewal of family bonds to the firm through dynastic succession*.

Family control and influence. The first and also most essential dimension of SEW refers to the control and influence of family members. Notably, to achieve the goal of preserving SEW, the family members must maintain the continuation of control of the firm. Therefore, family firms strongly desire to preserve owners' direct or indirect control, influencing over the firm's affairs even at the expense of financial outcomes (Gómez-Mejía et al., 2007). Insofar, even activities that could create value of firm but jeopardize the preservation of SEW, family members are willing to opt for the SEW preservation alternative.

Family members' identification with the firm. The second dimension reflects the close identification of the family with the firm. Considered as part of family identification and a place they belong to, the family firm becomes an extension of and brand of the family itself. Therefore, family members are more vulnerable with family business's activities. For example, they are sensitive to a family firm's image since it reflects family's reputation, consequently they are passionate in protecting and enhancing their recognition in business (Deephouse and Jaskiewicz, 2013, Berrone et al., 2010). Hence, they prefer shaping the business in line with the value built up in family.

Binding social ties. The third dimension relates to family firms' social relationships. Kinship ties with the trait of closed network and affinity ties are typically engraved in family business. As a result of closed network, members often share common collective benefits, feel closeness and interpersonal solidarity, consequently they can build up social capital, which in turn enhances shared value and trust among members (Cruz et al., 2012). Notably, the mutual social bonds exist not exclusively among family members but also extensionally to a wide set of outside stakeholder such as customers, nonfamily employees, suppliers (Berrone et al., 2012) .

Emotional attachment. The fourth dimension addresses the affective content of SEW and emphasize the role of emotions in the family business context. Undeniably, emotion influences human beings' everyday activities, and naturally is "an integral and inseparable part of everyday organizational work" (Ashforth and Humphrey, 1995) (p.98). Family as its own system, encompasses a wide range of emotions, from positive sense, such as warmth, love and happiness, to negative ones, such as anger, fear, sadness and disappointment (Epstein et al., 2003). In turn, family's emotional tie to family firms can lead to superior or inferior performance. For example, emotion of family ties encourages family members to pursue favorable self-image and promote determination, providing competency to compete in the market. In contrast, over-perseverance may lead family firms to slowly progress relatively to nonfamily firms.

Renewal of family bonds to the firm through dynastic succession. The fifth and last dimension of SEW refers to the intention of passing the business to next generations. The family firm which wishes to hold and pass to next generations is not simply consuming assets, more importantly, is heritage, value and tradition (Tagiuri and Davis, 1992). This sense of dynasty has important implications in determining time-horizon of strategic management choices. For

example, family firms are likely to offer "patient capital" to preserve the family's empire and values.

In a nutshell, noneconomic goals are primary objectives of family firms, distinguish them from nonfamily firms. Consequently, family firms are risk averse to loss of socioemotional wealth. They are willing to put a firm at risk to protect socioemotional wealth endowment. Indeed, these goals have a considerable impact on firms' strategic management choices. SEW model has important contributions to family business literature by illustrating motivations which influence strategic management choices of family firms and distinguish family firms from nonfamily firms. The model helps to explain observed behaviors of family firms which are considerably different from nonfamily firms.

1.2.4 Family capital theory

The most unique characteristic of family businesses is the reciprocal influence of two competing systems: a family system based on norms, values, and altruism, and a business system based on rational and economic principals. Knowledgeably, family grows in its own way, even shapes business values. Indeed, family is a root for individuals' development; as a result, undeniably it influences individuals' thoughts and behaviors. However, most influential theories used in family business primarily focus on the economic aspect of family firms, except SEW. Therefore, factors of family that contribute to family business are still questionable.

Family capital theory provides insightful views from family perspective to explain why and how competitive advantage is created in family firms. In their seminal work, Hoffman et al. (2006) suggest that "family businesses with high levels of family capital possibly do hold a sustained competitive advantage over family businesses with low levels of family capital and/or

nonfamily businesses" (p.135). They argue that family ties are more enduring than ties in social networks, which lead to building up stronger closure, more effective communication and preventing depreciation of value than those built from social ties. Therefore, family capital is more valuable than social capital.

Uniquely, family capital exists only in family, and is inimitable, unable to be acquired by other business. Hence, family capital is a distinguishing feature of family firms. Notably, family relational ties strengthen its capital. Specifically, the strong ties between individual family members help individual goals to converge quickly and more voluntarily toward a collective goal within family businesses, increasing the value of family capital; in turn, generating competitive advantage. In contrast, this convergence is more fragile in social capital existing in nonfamily firms. Consequently, competitive advantage created by social capital in nonfamily firms is less sustainable.

Rooted in social capital theory, family capital share a common feature with social capital which is closure (Coleman, 1988). In the context of family firms, due to more frequent interactions and history of relationships in families, closure is stronger. Closure is developed when members of a social network are sufficiently tied to insure the observance of norms (Coleman, 1988, Portes, 2009). In other words, relational ties are the foundation for fostering and nurturing closure. In turn, closure guide and monitor participants in a group to perform within established social norms. The more closure exists, the more guaranteed norms in a group to be followed due to the significant possibility of discovery of norms violation (by others in the social network), helping an organization to fulfill objectives more effectively.

Another factor that contributes to values of both family capital and social capital is communication. Compared to nonfamily firms, the communication is more extensive and

socialization is more instant in family firms since family members form a nucleus of relationships. Literally, communication is important in setting up and maintaining the effectiveness of any business since values and ways of working collectively must be communicated, socialized and shaped in perceptions and job-related behavior, especially to new members (Louis, 1980). The nucleus characteristic of family capital provides the consistency that is essential to socializing the norms and expectations. Clearly, the stability and continuity of social structure, which are crucial for both social capital and family capital, takes time to develop. Families with a strong social structure already built in long-time horizon are able to immediately implement family capital in business since it is already available. From this advantage, family businesses do not require the extensive development of social capital which is intensively required in other organizations. Furthermore, not like social capital in which strong and weak ties combine together (Stewart, 2003), ties in family capital are more uniformly strong. Thus, family capital is more unique and valuable than social capital since it is not only greater closure but also more intensive communication and fewer structural holes in social networks (Dyer Jr, 2003).

Last but not least, although both family capital and social capital are predicted to depreciate over time, the long-standing history of family with norms, values and trust cultivated across generations, makes depreciation matter less in family capital, while social capital depreciates over time (Lesser, 2000, Portes, 2009).

However, it is noticed that not all family firms but only family firms with strong family ties are able to create competitive advantages. Hoffman et al. (2006) argue that family ties are the foundation fostering and nurturing family capital. Specifically, in family with strong family ties, family members can interact frequently with high level of trust and are more willing to converge

individual goals toward a collective goal within family businesses. In turn, these facilitate effective information transformation channels and generate family norms, which are important in creating sustained competitive advantages. In contrast, in family with weak ties, family members may have low level of trust with each other and competing goals; as a result, family members may act for their self-interests rather than for family. A divergence in goals and self-interested behaviors are detrimental to firm performance (Kaye, 1991).

1.3 Empirical studies on family firms

1.3.1 Family firms and capital structure

Agency theory is the prominent framework to explain capital structure of family firms versus nonfamily firms (Michiels and Molly, 2017, Hansen and Block, 2021). However, it provides competing views on the relationship between family firms and leverage. Most studies on family firms' financing decisions are primarily based on European data, followed by North America and Asia. 81% of studies deal with a single country, while only 19% of studies are cross-country (Hansen and Block, 2021).

One theoretical perspective highlights a lower leverage ratio for family firms versus nonfamily firms (Jara et al., 2018, Benkraiem et al., 2018, Latrous and Trabelsi, 2012, Ampenberger et al., 2013, Schmid, 2013). One of the main explanations is that family firms have lower owner-manager agency costs (Jensen and Meckling, 1976). Indeed, family members often hold management positions and therefore the interests between the management and the firms' owners are aligned (Fama and Jensen, 1983). In addition, due to high wealth concentration, family owners have stronger incentives to effectively monitor the firm's managers

even if they do not hold an active role in management (Shleifer and Vishny, 1997). Therefore, family firms have a lower need to use debt as a tool to manage these agency costs.

Another theoretical perspective highlights a higher leverage ratio for family firms versus nonfamily firms (Setia-Atmaja, 2010, King and Santor, 2008, Morresi and Naccarato, 2016, Jewartowski and Kałdoński, 2015, Bunkanwanicha et al., 2008, Keasey et al., 2015, Croci et al., 2011, Ellul, 2008). The main argument relies on the agency costs between controlling family and minority shareholders. By holding a significant amount of shares, in addition to assigning family members as chief executive officers (CEOs), founding families have the power to extract private benefits at the expense of minority shareholders (Shleifer and Vishny, 1997). Therefore, founding family firms have greater incentives to maintain control over the firm. Thus, debt becomes an effective tool to enhance control power without ownership dilution. Many researchers find that expropriation issues are particularly severe when monitoring families' expropriation behavior is weak due to the absence of power of other blockholders (Jara-Bertin et al., 2008, Sacristán-Navarro et al., 2015, Santos et al., 2014).

Other perspectives on the relative use of debt by family firms versus nonfamily firms rely on risk aversion versus control motivation. The former perspective emphasizes the risk aversion of family firms due to low wealth diversification of founding families (Anderson and Reeb, 2003b). They argue that founding families (as undiversified blockholders) who consider the firm as a legacy to pass to next generations, are less willing to use more debt because it increases bankruptcy risk and threatens the survival of the firm (Mishra and McConaughy, 1999). In contrast, the latter perspective emphasizes the importance of founding families' control over the firm. Under SEW framework, founding families' owners are 'loss averse' with respect to SEW. They engage in risky activities to preserve SEW even at the expense of economic wealth

(Berrone et al., 2012). To achieve the objective of preserving SEW, family members need to perpetuate control of the firm. Therefore, family firms may prefer using debt over equity to maintain control and influence over the firm's business (Gómez-Mejía et al., 2007, Croci et al., 2011).

In addition, prior research has shown the important role of institutional environment in influencing the effect of family firms on leverage. Creditor rights are one of the most considered formal institutions in studying capital structure of family firms (Hansen et al., 2020). In countries with weak creditor rights protection, founding families have greater incentives to use debt as a control-enhancing strategy, while in countries with strong creditor rights protection, lenders are more willing to provide capital (Qian and Strahan, 2007).

Another institutional factor which is commonly considered in studying capital structure of family firms is shareholders' rights protection. In countries where shareholder rights are well protected, minority shareholders have more power for their capital provision; the expropriation activities of dominant shareholders are therefore limited. With strong protection, they are able to prohibit corporate self-dealing by managers and directors (La Porta et al., 1997, La Porta et al., 2000, Djankov et al., 2008). Therefore, the incentives to use debt to enhance control power for the purpose of expropriation are less pronounced. In contrast, if minority shareholders' rights are less protected, family controlling shareholders have greater incentives to use debt as a control-enhancing strategy to extract private benefits.

1.3.2 Family firms and borrowing costs

The impact of family firms on the cost of debt is mostly investigated within an agency costs framework, particularly shareholder-creditor agency costs (Hillier et al., 2018, Boubakri

and Ghouma, 2010, Anderson et al., 2003, Gao et al., 2020). However, this framework provides competing predictions regarding the shareholder-creditor relationships in family firms.

On the one hand, agency theory suggests that interests of family firms and creditors are aligned. The central argument is that founding families are less diversified (Anderson et al., 2003), focus on long-term survival and transgenerational continuity (Chrisman et al., 2013), and preserving reputation (Berrone et al., 2010). Therefore, they have lower preferences for risky investments, which is in line with creditors' interests. Consequently, the cost of borrowing is lower than nonfamily firms. Furthermore, controlling families usually build long-term relationships with creditors from which family firms can gain benefits such as more capital (Schwert, 2018), especially in terms of long-term debt (Charumilind et al., 2006). With long-term survivorship, family firms are more likely to nurture long-lasting trustworthy relationships with bankers to have access to debt funding for many years (Croci et al., 2011).

On the other hand, due to large block holdings and management positions, founding families are at risk of entrenchment for private benefits (Friedman et al., 2003), or engage in tunneling and moral hazard (Johnson et al., 2000). Hence, they may maximize family wealth rather than firm value (Aslan and Kumar, 2012). This can exacerbate the risk of agency conflicts between controlling families and creditors. As a result, creditors may increase the cost of debt (Purnanandam, 2008). Another concern is that ultimate shareholders usually have a wider divergence between control and cash flow rights which cause entrenchment and greater incentives to expropriate creditors (Lin et al., 2011, Pan and Tian, 2016).

Empirical evidence remains mixed. Family firms have a lower cost of debt in U.S (Anderson et al., 2003), China (Ma et al., 2017), Thailand (Swanpitak et al., 2020) and Spain (Duréndez et al., 2019), but a higher cost of debt in other European and Asian countries

(Boubakri and Ghouma, 2010, Ellul et al., 2007). Furthermore, prior research shows that the relationship between family firms and the cost of debt is moderated by firm characteristics such as firm opacity (Ma et al., 2017) or firm credit rating (Li et al., 2021). Institutional environment has been found to influence this relationship, particularly creditor rights protection (Ellul et al., 2007, Boubakri and Ghouma, 2010). Furthermore, the role of informal institutions becomes more important in investigating the impact of family firms on the cost of debt financing since many scholars have shown the role of culture in determining the cost of debt (Chen et al., 2016, Chui et al., 2016, Álvarez-Botas and González, 2021).

1.3.3 Family firms and performance

The classic agency theory suggests that family firms have a lower agency cost between managers and owners due to the ownership concentration (Jensen and Meckling, 1976). Naturally, managers are affiliated with founding family firms, resulting in the alignment of interests between managers and owners. Even family firms with outside managers have greater incentives to monitor managers effectively. Either way, family firms are expected to perform better than nonfamily firms. However, higher degree of ownership concentration in founding families can create a new agency problem between family controlling and minority shareholders (Demsetz and Lehn, 1985, Shleifer and Vishny, 1986). In addition, family managers can become entrenched if they have higher ownership concentration. This facilitates private benefits of control by large shareholders at the expense of minority shareholders (Grossman and Hart, 1986).

In addition to agency theory, resource-based view is another useful theoretical perspective in explaining performance differences between family firms and nonfamily firms

(Chrisman et al., 2005, Sharma and Chua, 2013). The central argument is that family involvement creates unique resources that allow family firms to develop competitive advantages related to "familiness". Family firms with a long-term management approach and generational transfers can foster and nurture long-term relationships with external stakeholders. These relationships help to enhance firm value (Carney, 2005, Chrisman et al., 2009). In addition, family firms are different from nonfamily firms with respect to strategic behaviors and objectives, therefore leading to differences in firm performance.

The empirical evidence on the relationship between family involvement and firm performance is scant and conflicting (Amit and Villalonga, 2014). In the US case, while McConaughy et al. (1998) and Anderson and Reeb (2003a) find that family firms have a superior financial performance over nonfamily firms, Smith and Amoako-Adu (1999) and Pérez-González (2006) find that family firms with family CEOs have an inferior performance. Morck et al. (1988) show that family involvement has a positive effect on performance for younger firms and a negative impact for older firms. The impact of family involvement also differs across countries. The positive impact of family firms on performance has been found in Spain (Gómez-Mejía et al., 2007), France (Sraer and Thesmar, 2007), Continental Europe (Barontini and Caprio, 2006), and Canada (Bozec and Laurin, 2008). In contrast, other scholars report a negative impact of family firms on performance in many countries: Sweden (Heaney and Holmen, 2008), UK (Hillier and McColgan, 2009), Denmark (Bennedsen et al., 2007), and France (Boubaker, 2007). In Asia, the results are also mixed. Family firms have superior performance in Japan (Allouche et al., 2008), East Asia (Driffield et al., 2006), and China (Ma et al., 2006); while family firms have inferior performance in Taiwan (Chang et al., 2010). In addition, there are significant differences in performance between founder-managed versus

descendent-managed family firms (McConaughy et al., 1998), young versus old family firms (Morck et al., 1988), or family firms with founder-CEOs versus non-founder CEOs (Fahlenbrach, 2009, Chow, 2021).

1.3.4 The particular role of context in family business research

The important influence of context has been highlighted in family business studies (Sharma and Chua, 2013). Empirical findings have been found inconsistent, partly because of contextual factors, such as institutional environment (Amit and Villalonga, 2014, O'Boyle et al., 2012). Therefore, scholars pay attention to context in their family business research (Berrone et al., 2020, Sharma and Chua, 2013).

Most research compares family firms' behaviors and outcomes in the context of developed versus less developed formal institutions (Soleimanof et al., 2018). Formal institutions explicitly define societal prescriptions and can be monitored and enforced via authoritative power. The central argument is that family firms are excellent to fill formal institution voids since family members decrease the risk of agency-costs derived from lack of monitoring mechanisms and uncertainty. Under resource-based view, in underdeveloped capital markets with inefficient contract enforcement mechanisms, founding families rely on family ties to acquire resources (Carney, 2005). Family firms are also advantaged in underdeveloped labor-intensive contexts. However, family firms run the risk of minority shareholders' expropriation, particularly in less developed formal institution contexts (Young et al., 2008).

Along with the formal institutions, the informal institutions play a dominant role in shaping the behaviors of individuals and organizations (Berrone et al., 2020). Informal institutions embrace norms, values, and beliefs in society. Therefore, they are more intangible

and more localized (North, 1990), and more resistant to change (Thornton et al., 2012). In the context of family business which is formed by the interaction between family logics which focus on core family values and beliefs, and business logics which typically focus on efficiency, scholars argue that founders/owners of family firms are driven by both formal and informal institutions (Lansberg, 1983). Hence, the effects of informal institutions on family firms are particularly important (Soleimanof et al., 2018). Studying family versus nonfamily business may not be comprehensive enough due to the absence of consideration for informal environments, especially in Eastern regions where the business landscape is characterized by the informal nature of stakeholder relations. While formal institutions facilitate effectiveness, informal institutions influence values and norms.

In addition, SEW, a strongly desirable objective of family firms (Gomez-Mejia et al., 2011), is rooted in informal institutions. Therefore, family firms are expected to be more influenced by informal institutions. Family firms may face dilemma due to the inherent disparity between the business and normative standards (Stewart, 2003). Characterized by extensive reliance on social capital, family firms are expected to be heavily influenced by informal institutions, particularly to compensate for the lack of developed formal institutions (Carney, 2007).

Therefore, studying family business interaction with institutional contexts implies a deep understanding of family business (Soleimanof et al., 2018, Berrone et al., 2020). In particular, the role of informal institutions is amplified since family firms are characterized by concerns for preservation of their socioemotional wealth (SEW), and reliance on social capital.

1.3.5 Family firms in East Asia

Asian regional context opens a rich avenue for family business research for several reasons. First, family-controlled businesses dominate in this area that has been growing at a high rate in the past few decades. Indeed, the most typical and oldest business form in Asian business landscape is family firm, representing more than 80% of all (private and public) corporations across industries and a third of listed firms in Asian economies in terms of value (EY, 2017). Second, there is a rich contextual environment in which formal institutions are at different levels of development while informal institutions are unique in terms of history, culture, and socio-political environment. Third, the region is family-oriented, suggesting that families may play an important role in the business-family dyad. Fourth, family businesses are extremely divergent, ranging from some of the oldest businesses in the world, such as the Japanese innkeepers Houshi Ryokan which was established in 717 and has been managed by 46 generations of the Houshi family, to very young high growth firms such as the Automatic Manufacturing Limited in Hong Kong (Au et al., 2013).

China, Japan, India, and East Asia are unique regions with unique cultures for studying family business (Bennedsen et al., 2022). There has been a large and developing literature on Chinese family firms in recent years. It primarily focuses on the impact of culture on family business such as the association between collectivism and family involvement (Fan et al., 2022), the influence of Confucianism on performance (Fan et al., 2022, Chen et al., 2021), or the impact of religion on succession intention and risk taking (Shen and Su, 2017, Jiang et al., 2015). The relationship between family involvement and firm performance remains also well investigated (Cai et al., 2012, Wei et al., 2011). Scholars intensively investigate family firm versus nonfamily firms performance in East Asian countries (Lee and Barnes, 2017, Bennedsen et al., 2015, Campbell II and Keys, 2002, Kim, 2012, Chu, 2011). In addition, succession process in family

firms have also increasingly attracted academic research (Bennedsen et al., 2022), especially in Hong Kong where most family firms have a long history and are managed by multiple generations, or in Korea where inheritance tax is very high, up to 50% of the transferred wealth, or in Taiwan where succession is the biggest issue for family firms. In India, research on family business primarily focuses on the role of business groups in providing internal capital to financially support weaker firms within the group (Gopalan et al., 2007), relative benefits of belonging to business groups (Khanna and Palepu, 2005), or facilitating tunneling channels in business groups (Bertrand et al., 2002). The succession challenges in family business still call attention for academic investigation (Pawar, 2009, Bhattacharyya, 2007). The most unique characteristic of family firms in Japan is the dynasty of control without ownership (Bennedsen et al., 2021, Mehrotra et al., 2013).

Most studies on Asian family businesses are single country, while only a few studies are cross-country (Hansen and Block, 2021, Wagner et al., 2015). China is the most studied country for family business, followed by Thailand and Korea (Wang and Shailer, 2015). Furthermore, many studies on Asian family business have incorporated the particularities of their context effectively. For example, the economic liberalization of China in 1978 and the establishment of Economic and Technology Development Zones to boost high-tech industries and foreign capital provide the set of contextual factors that enable Deng et al. (2013) to study the impact of single versus multiple owners and firms' zoning location on firm innovation across China. In Taiwan, to prevent consequences from the Asian Financial Crisis of 1997, the government imposed a governance reform in 2002 that required publicly traded family firms to recruit outside directors. This legal change provides an excellent context to study different impacts of outside directors

appointed voluntarily before versus appointed obligatory after the law comes into on the family business.

In a nutshell, family business in general and Asian family business in particular is a young and emerging research area. The first mainstream research in Asian family business focus on the differences between family versus nonfamily firms across a number of metrics, covering performance, firm strategies, or governance mechanisms (Bennedsen et al., 2022). As a result of business growth and the need for external capital, family firms face challenges related to ownership structure. Succession is one of the biggest challenges in most Asian countries and many family firms suffer economically due to management transfers within the family. Lastly, another stream of research focus on values derived from culture such as religion beliefs or cultural norms, which are inculcated in family members from a very early age. These values which are deeply rooted in the personal psyche have deep and long-lasting impacts on both family and business ethos and may persist across generations. They generate distinctive values as well as leadership styles which distinguish family firms from nonfamily firms.

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CHAPTER 2: THE IMPACT OF FAMILY OWNERSHIP STATUS ON FIRM LEVERAGE. EMPIRICAL EVIDENCE FROM EAST ASIA

Abstract

I investigate the impact of family firms on firm leverage in East Asia. I find consistent evidence that family firms have a significantly higher level of debt than nonfamily firms. The positive impact of family ownership on firm leverage is stronger in environments where creditor rights protection is weak, and religion is more influent. The results are robust to alternative family firm classification and leverage measures, and to inherent problems of ownership and leverage literature, endogeneity issues.

Keywords: Family firms, capital structure, East Asia.

JEL classification: G30, G32.

2.1 Introduction

Modern corporate finance literature is built on the common thought that firms are widely and dispersed held (Berle and Means, 1932, Jensen and Meckling, 1976). However, it is interesting to acknowledge that most firms around the world have the founder or the founder's family as large shareholders. Indeed, the prominent role of families in large firms is reported globally, evidenced by more than half of the largest publicly traded firms in 27 countries are controlled by families (La Porta et al., 1999), from U.S. (Anderson and Reeb, 2003a, Villalonga and Amit, 2006) to Europe (Faccio and Lang, 2002). Especially, the prevalence of extensive family ownership and control is more pronounced in East Asia (Claessens et al., 2000, Carney and Child, 2013) where legal investor protection is weak (La Porta et al., 1999).

More importantly, the blending family with business distinguishes family firms from nonfamily firms. Notably, most important business decisions are made by a group of people having familial relationships, therefore they serve toward families' objectives rather than firms' objectives. Indeed, in contrast to nonfamily firms whose economic targets play primary role, socioemotional wealth is a prominent goal in business-decision process among family firms (Berrone et al., 2012, Bertrand and Schoar, 2006). This creates the distinctive foundation which is different from typical ones assumed in traditional capital structure theories[4].

The preservation of extensive family ownership and control raises the primary conflicts of interests differently from original conflicts in classical agency theory. Agency costs between managers and shareholders are less severe with the presence of large family ownership as founding families have more incentives to monitor managers (Jensen and Meckling, 1976).

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[4] For comprehensive review capital structure theories, see HARRIS, M. & RAVIV, A. 1991. The theory of capital structure. *the Journal of Finance,* 46**,** 297-355.

Indeed, founding family members usually gain superior knowledge of firm affairs due to direct involvement in the firm's activities; hence, they are able to effectively interact and monitor managers, even outside managers (Anderson and Reeb, 2003a). Founding families pursue long-term management approach which is opposite to myopia and short-termism of managers in widely dispersed held firms (Bertrand and Schoar, 2006). In addition, founding families as large, undiversified block holders, are more risk averse (Anderson and Reeb, 2003b). The incentives of using debt to reduce the agency costs are less pronounced within family firms; consequently, family firms may use less debt than nonfamily firms.

However, by having superior information and management position, founding families have high opportunities to expropriate minority shareholder wealth (Demsetz and Lehn, 1985). In addition, the separation of control from cash flows rights in most family firms provides greater incentives and ability for controlling families to exploit minority shareholders. Family firm managers may act not towards the entire business but towards the family itself (Bertrand and Schoar, 2006). Founding families who own a group of publicly traded and private firms may divert resources from public firms to private firms (Chrisman and Patel, 2012, Block, 2012). Therefore, family firms may have greater incentives in using debt to enhance control power.

Despite of the predominance of agency framework in explaining the relationship between family firms and leverage, it still seems puzzling scholars since it does not consider idiosyncratic issues unique to family firms (Morck and Yeung, 2003). This calls for "own" paradigm of family business (Chrisman et al., 2005). In responding to the need, socioemotional wealth (SEW) framework has been increasingly used by various scholars in family business literature. Socioemotional wealth (SEW) framework posits that noneconomic goals influence family firms' strategic decisions (Gómez-Mejía et al., 2007). Put differently, the framework postulates that

family firms are 'loss averse' with respect to SEW and they compel risky activities to protect SEW even at the expense of economic wealth. When the control dimension of SEW predominates, family owners have greater incentives in limiting the presence of financing sources that may threaten family control, such as equity (Gomez-Mejia et al., 2010).

Empirical studies provide mixed results of family firm influence on leverage. Mishra and McConaughy (1999) find that family firms among large public U.S. firms use less debt than nonfamily firms. They explain that family firms are concerned about the risk of losing control to creditors and the increase in the cost of financial distress. Anderson and Reeb (2003b) find that family firms finance real investments as nonfamily firms among U.S. largest public firms. They explain that founding families with large block holding, and undiversified investment are more risk averse, pursuing risk-reducing strategy such as using a lower default risk securities like equity. They also find that founding families have a little influence on financing policies. Meanwhile, Ampenberger et al. (2013) find that family firms borrow less than nonfamily firms in Germany. They explain that within family firms, agency cost of free cash flows is less severe, and founding families with large ownership stakes have strong incentives to monitor managers.

In contrast, Driffield et al. (2007) and Singh (2016) find that family firms in East Asia have a higher level of debt than nonfamily firms. Driffield et al. (2007) argue that the separation of voting from cash flows rights generates opportunities for family controlling shareholders to extract scares resource of a firm for private benefits. Hence, family firms attempt to maintain control power by overrelying on debt. Singh (2016) finds that benefits from creditors' monitoring encourage family firms in Indonesia to use more debt. Croci et al. (2011) also show that European family firms prefer debt over equity, and are more reluctant to raise capital

through equity offerings than nonfamily firms. Lo et al. (2016) and Brailsford et al. (2002) find a non-linear relationship between leverage and family ownership.

East Asia provides an ideal setting for studying the influence of family ownership on capital structure for three main reasons. First, family-controlled firms have been the heart of economy in this region, observed that founding families control over half of the largest business groups in many East Asian countries. Second, from an institution-based view, emerging economies like East Asia often create institutional voids. Carney et al. (2011) show that large family firms in emerging economies excel in filling some of institutional voids than other business forms. In addition, informal institutions which shape cultural values and organization behaviors, are very influential and diverse in this region (Dinh and Calabrò, 2019). These make institutional environment foundation considerably different from those typicaly established in capital structure theories. Third, founding families in East Asia are likely to play more active roles in business since this region is more family – oriented. Scholars have long-portrayed that East Asia is peculiar to Europe and North America with extended family co-residence and "strong" family ties (Goode, 1963, Reher, 2004). Therefore, founding families will exert more influences on family firms.

I investigate the impact of family ownership on leverage in East Asia including South Korea, Taiwan, Indonesia, Malaysia, Singapore, Philippines, Thailand, and Hong Kong. [5] The data spans from 2000 to 2017 and cover more than 872 largest public firms; we end with more than 12,800 firm-year observations. The findings show that family firms over-rely on debt, supporting our expectation that family firms enhance control power by using debt since it is

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[5] We acknowledge that Hong Kong is a special administrative region rather than a country, but to preserve the continuity of the discussion we refer to it as a country (Carney and Child, 2013).

considered as an effective tool to raise capital without stock dilution (Demsetz, 1983, Demsetz and Lehn, 1985, Driffield et al., 2007). The results are robust to alternative family firm classification and leverage measures, and to inherent problems of ownership and leverage literature: endogeneity issues.

The paper contributes to family business and finance literature in several important dimensions. First, we enrich family business literature by adding East Asian family firms to current family business literature. There has been a flourishing number of studies on the impact of family firms on capital structure focusing on the West (De Massis et al., 2012, Ampenberger et al., 2013), observed that 73% of family business research focuses on North America and Europe (De Massis et al., 2012). Given the number of studies on 'Asian' family firms is still limited (De Massis et al., 2012, Sharma and Chua, 2013), filling this gap is important as the family firm is not only an extensive but also a durable organizational form in East Asia, the world's fastest-growing region (Claessens et al., 2000, Carney and Child, 2013, The Economist 2015). Therefore, studying family firms in East Asia contribute to the generalization of the knowledge about family business around the world.

Second, this paper extends the capital structure literature by studying the impact of family ownership on firm financing decisions in a more comprehensive institutional setting. Following the growing literature on institutional logics (Fathallah et al., 2019), I capture both formal and informal institutions, given that informal institution plays a dominant role along with formal institution in shaping individuals and organizations' behaviors (Berrone et al., 2020). Given the influential and divergent religions and motivated by previous research (Dinh and Calabrò, 2019, Soleimanof et al., 2018), I take into account religion as an important informal factor that may affect firms' activities. Soleimanof et al. (2018) suggest that studying family firms in contrasting

religion contexts provides better understandings of family firms. Studying the impact of family ownership on capital structure in the contextual environment which is noticeably different from developed economies where capital structure theories are established is salient to contribute to a better understanding of capital structure determinants.

The rest of the paper is structured as follows. Section 2 presents the literature review and proposed hypothesis. Section 3 presents data and methodology. Section 4 displays the results and discussion. Section 5 provides the conclusion.

2.2 Literature review

2.2.1 Agency theory

All firms do business under umbrella of agency framework, and family firms are not exception. However, agency costs among family firms are different from those of classic agency theory. In particular, the conflicts of interests between managers and shareholders are often naturally mitigated in most family firms since CEOs are usually affiliated with controlling families (Jensen and Meckling, 1976). Having superior knowledge derived from daily business activities, they are able to effectively deal with managers. Therefore, the agency cost of free cash flows within family firms is lower. These make benefits of debt less pronounced in family firms (Jensen, 1986).

However, another agency cost between family controlling and minority shareholders is borne. A large body of literature reports the control motivation to expropriate minority shareholders in family firms (Demsetz, 1983, Demsetz and Lehn, 1985, La Porta et al., 1999, Claessens et al., 2002, Villalonga and Amit, 2006, Shleifer and Vishny, 1986). The expropriation can happen under a variety of forms. Family shareholders may sell assets or products of

controlling firm at a lower price to a private firm they own, which is known as "transferring price". Controlling families may pursue socioemotional wealth for the family at the expense of the firm by distracting scarce resources of the firm (Block et al., 2013). Founding families who own a group of publicly traded and private firms may divert resources from public firms to private firms, or family firms may invest less in R&D (Chrisman and Patel, 2012, Block, 2012). When family shareholders have incentives to maintain control power in a firm, they are less willing to issue stock as this will dilute their control power. Hence, they may prefer using debt instead of equity.

2.2.2 Socioemotional wealth (SEW)

Socioemotional wealth framework has been increasingly used by various scholars in family business literature. According to SEW framework, family owners pursue SEW, noneconomic goals, and are 'loss averse' with respect to SEW. They will engage in risky activities to preserve SEW even at the expense of economic wealth (Berrone et al., 2012). 'Family Control and Influence' and 'Family Identity' are the most important socioemotional goals in strategic-decision process in family firms (Cennamo et al., 2012).

To achieve the objective of preserving SEW, family members need to perpetuate control of the firm. Therefore, family members need to maintain direct or indirect control and influence over the firm's business regardless of financial concerns (Gómez-Mejía et al., 2007). The ability to control empowered family members can derive from strong ownership or from management positions. The control power can be exercised directly, such as being CEO or chairman of the board, or more tactfully, such as appointing members of the top management team. The control over strategic decisions of family members is the key characteristic that distinguishes family firms from nonfamily firms (Chua et al., 1999, Schulze et al., 2003).

The second dimension of socioemotional wealth is the close identification of the family with the firm. Family members preserve firm reputation since they consider the firm as an extension of the family itself. This is likely to have a significant influence on the attitudes toward stakeholders. This makes family members quite sensitive about their image they shape to their internal stakeholders, such as employees and minority shareholders and external stakeholders, such as customers, suppliers, and other external stakeholders.

Control and reputation are competing socioemotional objectives which are well documented in the family firm literature (Berrone et al., 2012). While control increases family socioemotional wealth, it is likely to be achieved at the expense of reputation or conflict with nonfamily stakeholders, thus negatively impacting the second-order dimension of socioemotional wealth. When the control predominates, family owners have a greater incentive in limiting the presence of financing sources that may threat family control, such as equity (Gomez-Mejia et al., 2010). In contrast, when the family identification of SEW predominates, family owners have alignments with minority shareholders, the incentive for using debt is smaller.

2.2.3 Hypothesis development

The most important benefit for which founding families control a firm is the possibility of expropriation of minority shareholders wealth (Demsetz, 1983, Demsetz and Lehn, 1985, La Porta et al., 1999, Claessens et al., 2002). The expropriation risk is especially high in East Asia where legal investor rights protection system is weak (La Porta et al., 1998). The controlling owners with effective control of the firms are likely to deprive the rights of minority shareholders (Shleifer and Vishny, 1997, La Porta et al., 1999). Therefore, we expect that in weak legal and institutional environments where commitment mechanisms for avoiding moral hazard problems are less credible, family firms are likely to be motivated by preference for

private interest of control (Burkart et al., 2003), incentives of expropriating minority shareholders (Djankov et al., 2008, Jensen and Meckling, 1976, Claessens et al., 2002), and entrenchment in management (Chen et al., 2014).

In addition, we argue that family firms are motivated to enhance control power not purely due to pecuniary goals but also due to socioemotional wealth goals. Even family firms have multidimensional aspects of socioemotional wealth, in which control and reputation are competing goals, we consider that control is the first-order priority of socioemotional wealth since other aspects of socioemotional wealth is feasible only if family controls the firm (Zellweger et al., 2012). In other words, control is a necessary condition to generate and preserve socioemotional wealth as control is what allows the family to pursue its interests through the firm. Prior research shows that control and influence are highly desirable socioemotional wealth to family members in any firm's affair (Zellweger et al., 2013, Berrone et al., 2012). Kammerlander et al. (2015) state that *"instead of formulating an overly challenging performance goal, the family may formulate a minimum threshold performance level that should secure the family's most central goals, such as upholding family control of the firm over time"* (p.68). Furthermore, given that religion in East Asia is very influential within society (Clobert, 2020), founding families are even more risk averse of losing SEW preservation. Religion is a key factor that influences family firms in pursuing SEW preservation (Dinh and Calabrò, 2019) . Shen and Su (2017) find that the religious founders of family firms are more risk averse of losing the family firm's SEW. Hilary and Hui (2009) point out that more religious environment in which firms operate has an influence on firms' behaviors.

Therefore, we expect that family firms have a greater incentive to maintain control power to fulfill both socioemotional wealth and financial objectives of family firms in the context of weak legal investor protection institutions and religion diversity. We hypothesize that:

H1: Family firms use more debt than nonfamily firms.

2.3 Methodology

2.3.1 Data collection

The data is structured as an unbalanced panel of 872 firms that cover the time span from 2000 to 2017. First, I obtain the ultimate ownership data from Carney and Child (2013) which covers 1,387 large publicly traded firms in nine East Asian countries including Japan, South Korea, Taiwan, Hong Kong, Singapore, Malaysia, Indonesia, Philippines, and Thailand. From this data, I exclude all Japanese corporations to avoid outlier effects as Japanese firms are distinctive from the rest of the firms in East Asia.[6] I also exclude financial institutions following current literature (Anderson and Reeb, 2003b, Driffield et al., 2006, Ampenberger et al., 2013). Then, I obtain and calculate financial information of those firms from Thomson Reuters DataStream Advance. Third, I use the data on M&As transactions from Bloomberg for the period 2000 to 2017 to control for the change in the type of ownership structure. After excluding firm-year observations of those firms that are targets in M&A transactions for which I cannot determine ultimate ownership after M&A, I end up with 872 non-financial firms corresponding to 12,836 firm-year observations.

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[6] Having widely dispersed ownership structures, the separation of ownership and management are more important in Japanese firms than in East Asia economies CLAESSENS, S., DJANKOV, S., FAN, J. P. & LANG, L. H. 2002. Disentangling the incentive and entrenchment effects of large shareholdings. *The journal of finance,* 57**,** 2741-2771.. The largest shareholders in Japanese firms are widely held by financial institutions, which is much different from many economies in the region. More importantly, financial institutions and their affiliated firms often cooperated to influence the governance of the corporations, which is difficult to capture using formal ownership data.

Finally, I obtain macro factors including creditor rights index and legal origin from La Porta et al. (1997) and Djankov et al. (2007). I obtain the information related to religions in East Asia from the Central Intelligence Agency.

2.3.2 Variables

Dependent variable: Leverage

To investigate the impact of family ownership on leverage, I use the long-term interest-bearing debt over the market value of a firm as a proxy for capital structure (De Jong et al., 2008, Titman and Wessels, 1988, Booth et al., 2001, Demirgüç-Kunt and Maksimovic, 1999). [7] Long-term interest-bearing debt provides information on long-term capital raised by firms, which is consistent with the theoretical definition of capital structure as a mix of long-term debt and equity. I use book value of debt due to difficulties in obtaining data to calculate the market value of debt.

Firms may face with the financing constrains, leading firms to use short-term debt to finance investments. To account for that, I use total interest-bearing debt over the market value of a firm as an alternative debt measurement for robustness checks.

Explanatory variable: Family firm

Family firm is our main explanatory variable of interest. I follow one of the most common approaches (Claessens et al., 2000, Carney and Child, 2013, O'Boyle et al., 2012, La Porta et al., 1999, Faccio and Lang, 2000) to distinguish a family firm from others based on ownership. A firm is defined as a family firm if family members represent the largest number of voting shareholders and hold at least 20 percent of ownership. I design a dummy variable,

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[7] All variables are defined in the Appendix A.

Family_firm, equals to 1 if a firm is defined as a family firm, otherwise 0. Furthermore, I use the cut-off value of 10% of ownership for robustness checks.

Control variables

I control for key firm-specific factors including firm size, tangibility, profitability, and growth opportunities that are most popular in capital structure literature. [8] I control for firm size, *Firm_size*, measured as the natural logarithm of total assets. Firm size is an inverse proxy for expected bankruptcy cost (Harris and Raviv, 1991). Large firms are well diversified and have lower financial distress cost, leading to using more debt to finance investments. The positive relationship between firm size and leverage is well documented in most empirical studies (Booth et al., 2001, De Jong et al., 2008, Titman and Wessels, 1988, Rajan and Zingales, 1995). The same results are found in studies on the capital structure in East Asia (Deesomsak et al., 2004, Driffield et al., 2007, Pandey, 2001).

I control for tangibility, *Tangibility*, measured by property, plant and equipment (PPE) over total assets. Tangible assets can be used as collateral to reduce the agency cost between borrowers and lenders (Besanko and Thakor, 1987) since it has more value than intangible assets in financial distress (Almeida and Campello, 2007, Murro and Peruzzi, 2019), helping creditors to have high recovery values in default states. Hence, firms with high tangibility can borrow more easily. The positive association between tangible assets and leverage are found conclusively in many empirical studies (Rajan and Zingales, 1995, Booth et al., 2001, De Jong et al., 2008).

I also control for profitability, *Profitability*, measured by earnings before interest, tax, depreciation and amortization (EBITDA) over total assets. Myers and Majluf (1984) show that

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[8] For a comprehensive review of capital structure literature, see HARRIS, M. & RAVIV, A. 1991. The theory of capital structure. *the Journal of Finance,* 46**,** 297-355.

investors usually have less information than insiders, thus tending to discount the stock price. In short run with fixed dividend and investment policy, a decrease in profitability will lead to internal fund deficit. Firms prefer to finance internal deficit by debt over equity to reduce the cost of asymmetric information, as issuing equity would send a negative signal to the stock market. The negative relationship between leverage and profitability is also documented in many empirical studies (Titman and Wessels, 1988, Rajan and Zingales, 1995, De Jong et al., 2008, Booth et al., 2001, Pandey, 2001).

I control for growth opportunity, *Growth_opp*, measured as total assets minus book value of equity plus market value of equity divided by total assets. Firms may face underinvestment problem due to asymmetric information between insiders and creditors (Myers and Majluf, 1984). Consequently, firms with growth opportunities have a tendency to use less debt to avoid underinvestment (Jensen, 1986, Stulz, 1990). The underinvestment issue, which is presented as the negative relationship between growth opportunities and leverage, is documented in many empirical researches (Rajan and Zingales, 1995, Deesomsak et al., 2004, Pandey, 2001, De Jong et al., 2008).

I also control for firm age, *Firm_age*, measured as natural logarithm of years from establishment. Old firms may have long-term bank relationships and credit history, leading well-established firms to borrow more easily.

Existing literature shows that institutional environment should have an impact on the shareholder-debtholder agency conflicts (Ellul et al., 2007, Claessens et al., 2000, Durnev and Kim, 2005). Qian and Strahan (2007) argue that stronger creditor protection provides greater bargaining power and ability to take control of firms and force repayment in case of default; consequently, creditors face less risk, and in turn are more willing to lend to firms. Among

institutional environment factors, I control for creditor rights as legal creditor protection is the most important determinant of the quality of contracting environment between shareholders and creditors (Qian and Strahan, 2007, Bae and Goyal, 2009, Godlewski, 2020).

I also control for the legal origin of a country since it is a major determinant of the legal protection of creditor rights and minority shareholders (La Porta et al., 1998, La Porta et al., 1999). The legal origin is a key factor in explaining differences in both financial systems and economic growth. La Porta et al. (1998) find that countries with a common-law origin protect investor better and have more developed economies than countries with civil-law origin. Therefore, I control for legal origin by using a dummy variable that equals 1 if the legal origin is common law, and 0 otherwise.

Lastly, I control for religion. Clobert (2020) show that "religion in East Asia appears to be more diffuse, less organized, but still very influential within society" (p. 61). Chen et al. (2016) find that stronger religiosity is associated with more favorable loan terms. Baxamusa and Jalal (2014) find that firms operating in different religious societies finance differently. Hilary and Hui (2009) also find that firms doing business in societies with higher level of religiosity are more likely to have a lower level of risk exposure. Therefore, I control for religion to shed some light on the impact of family firms on the leverage under different formal as well informal institutions setting. I include religion dummy variables in the model that consist of *Buddhism, Catholic* and *Islam*. *Buddhism* equals 1 if more than 50 percent of population of a country follows Buddhism, otherwise 0. [9] *Catholic* equals 1 if more than 50 percent of population of a

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[9] Except for Taiwan which has a proportion of population following Buddhism and Taoism at 35.3% and 33.2%, respectively. Buddhism and Taoism share common value and beliefs with strong emphases on collectivism and familial interests (Lee et al. 1994). Chang (2012) find that Buddhism and Taoism religions have significant positive effects on strong family ties for all married individuals in Taiwan. Therefore, we consider people following Buddhism and Taoism in Taiwan as one group.

country follows Catholic, otherwise 0. *Islam* equals 1 if more than 50 percent of population of a country follows Islam, otherwise 0.

2.3.3 Model

The main estimation method applied in this analysis is pooled OLS regression. We use the lagged values for all firm characteristic explanatory variables in the regressions (Schmid, 2013). Hence, the base model is:

$$Lev_{it} = \beta_0 + \beta_1 FF_{i,t-1} + \sum_{j=1}^{j} \lambda_j Firm\_factors_{i,t-1} + \sum_{k=1}^{k} \gamma_k Country\_factors_i$$

$$+ \sum_{m=1}^{m} \theta_m Industry\_Dum_i + \sum_{n=1}^{n} \mu_n Year\_Dum_t + \varepsilon_{it}$$

Lev_{it} is the leverage ratio of firm i in year t, measured as long-term and total market-debt ratio, FF is a family firm dummy variable, $Firm\_factor_{it}$ is a vector of firm specific control variables, $Country\_factors_{it}$ is a vector of country specific control variables, $Industry\_Dum_i$ are industry dummies, $Year\_Dum_t$ are year dummies and ε_{it} is an error term.

To account for the problem that the results might be biased by endogeneity, I run instrumental variable (IV) estimations.

2.4 Results and discussion

2.4.1 Descriptive statistics and univariate results

I remark that family firms use more debt than nonfamily firms most of the time (**Figure 2-1**). **Figure 2-2** shows that family firms have a higher leverage level in more than half of the

countries. We also see the consistent differences in financing between family firms versus nonfamily firms (**Figure 2-3**).

[Insert **Figure 2-1** here]

[Insert **Figure 2-2** here]

[Insert **Figure 2-3** here]

Table 2-1 presents the correlation matrix of the variables used in the model. Our two market-dependent variables are highly correlated (0.78). Regarding the correlations between the explanatory variables, there is no high correlation among them. Therefore, it is unlikely that I have multicollinearity problems across these variables.

[Insert **Table 2-1** here]

Table 2-2 presents various descriptive statistics and univariate results for dependent and key explanatory variables for the full sample, and by family versus nonfamily firms. For all firms, the average long-term leverage ratio is about 12.24% with a large standard deviation. Firm average total debt is about 23.08%. Compared to nonfamily firms, the univariate results indicate that family firms use more long-term debt (12.87% vs. 11.82%) with a statistically significant difference at the 1% level. Family firms also have a higher average total debt ratio than nonfamily firms (24.37% vs. 22.21%). Family firms are smaller in size, less profitable and have less growth opportunities than nonfamily firms. For example, family firms have a lower EBITDA to total assets (10.6% vs. 11.67%), and lower market to book ratio (1.38 vs. 1.50). These differences between the two groups are statistically significant at the 1% level. Family firms have more tangibility than nonfamily firms (38.65% vs. 36.38%).

2.4.2 Regression results

The univariate tests in **Table 2-2** provide preliminary evidence that family firms have a higher leverage ratio than nonfamily firms in both leverage measurements.

Table 2-3 reports the main results. I use long-term and total market-debt ratio as dependent variable in column 1 to 4 and 5 to 8, respectively. Column 1 reports that the coefficient of *Family_firm* is positive and statistically significant at 1% level, which indicates that family firms have a higher leverage ratio than nonfamily firms. Column 4 shows that coefficient of *Family_firm* is positive and statistically significant at 1% level, suggesting that family firms also use more total debt than nonfamily firms. The results support the control motivation hypothesis that family are motivated by control power through using more debt than nonfamily firms since debt is an effective tool to avoid ownership dilution (Demsetz and Lehn, 1985).

Consistent with previous studies (Booth et al., 2001, De Jong et al., 2008, Titman and Wessels, 1988, Rajan and Zingales, 1995), I find that the effect of firm size on the leverage is positive and significant at the 1% level in both leverage measurements. In addition, the effect of the tangibility on the leverage is positive and statistically significant at conventional level. In contrast, the market-to-book ratios and profitability are negatively related to leverage ratio and significantly at 1% level. Similarly to study of Anderson and Reeb (2003b) and Driffield et al. (2007), I find that the age of the family firm has no impact on the leverage.

Turning to the effect of formal and informal institutions on leverage, the results show that the coefficients of *Creditor_right* is negative and significant at the 1% level, indicating that firms

operating in countries with stronger creditor rights protection use less debt. It can be possibly explained that debt is more risky for firms in strong creditor rights protection environment since firms are likely to be forced into bankruptcy in financial distress times (De Jong et al., 2008). Therefore, firms are less willing to borrow since they may face with relatively strict debt contracts that the creditors may require on them. I report that the coefficients of *Legal_origin* are positive and significant at 1% level, indicating that firms doing business in common law countries have a higher level of leverage. A possible explanation is that countries with the common-law origin offer better protection to investors and have more developed economies and financial systems (La Porta et al., 1998), giving firms easier to access to external financing. Additionally, I find that the coefficients of religion dummy variables are negative and significant at the 5% level, except for *Islam*, suggesting that firms located in more religious societies use less debt than firms operating in less religious societies. The results are in line with Hilary and Hui (2009) who find that firms located in region with a higher level of religiosity are likely to have lower risk exposure (Hilary and Hui, 2009).

Furthermore, to investigate whether the positive impact of family firms on leverage changes under different institutional settings, I include interaction terms of *Family_firm* with *Creditor_right, Legor_Origin* and *Non-religion* dummy variables separately in the model. The results show that the coefficients of the interaction term between *Family_Firm* and *Creditor_right* are negative and significant at the 1% level, suggesting that the positive impact of family firms on both long term and total leverage ratio are weaker in stronger institutional environments (**Table 2-3**, Column 2 and 6). It can be explained that the incentives of using debt to enhance control power among family firms are reduced in countries where creditors' rights are

well protected. In contrast, the results show that the legal origin does not moderate the impact of family firms on leverage (**Table 2-3**, Column 2 and 7).

Regarding to the religion environment, I find that the coefficients of the interaction term between *Family_firm* and *Non_religion* is negative and significant at 5% level. The results indicate that the positive impact of family firms on leverage is weaker in less religious societies. Put differently, family firms in more religious societies use more debt than family firms in less religious region, indicating that family firms located in more religious societies are more aggressive in pursuing control-enhancing strategies to improve control power. The results are in line with the study of Li et al. (2021) who find that religious atmosphere has the moderating impact on family members' decisions. In addition, prior research has shown that once predominant religion rise as a social norm, it will affect behaviors of individuals located in that region, even if they are non-adherents (Kumar et al., 2011, Dyreng et al., 2012, Du et al., 2014). Religion also has been shown as a key factor that influences pursuing of SEW goals in family firms (Gómez-Mejía et al., 2007, Jiang et al., 2015). Therefore, family firms operating in more religious communities are likely to value more non-financial goals; as a result, they are likely to be more loss aversion of SEW, leading to use more debt to maintain SEW endowment.

[Insert **Table 2-3** here]

2.4.3 Robustness checks

So far, I have documented that family firms have a higher leverage ratio compared to nonfamily firms. In this section I conduct a range of robustness checks of finding results.

Family firm classification

The prior empirical studies on family business have shown a variety of ways to define family firms (Prencipe et al., 2014, O'Boyle et al., 2012, Hernández-Linares et al., 2017). I acknowledge that results may be different corresponding to family firm classification. To examine whether the results are robust to an alternative proxy for a family firm, all firms in the sample are reclassified at the threshold of 10% ownership. A firm is classified as a family firm if the ultimate largest voting shareholder that holds equal or more than 10% of ownership is a family. The results are reported in **Table 2-4**. The results are strongly consistent. The results so far firmly suggest that family firms use more debt than nonfamily firms irrespective of the family firm classification.

[Insert **Table 2-4** here]

Crisis

Since the study time covers the financial crisis period, one can concern that the effect of family firms on leverage might be overstated. The literature suggests that the 2008 Global Financial Crisis exposed firms to significant external shocks, such as low financial performance (Grillitsch and Tavassoli, 2018, Kim et al., 2015); these in turn affect capital structure. Prior studies have shown that family firms have a competitive advantage over nonfamily firms during adverse economic times due to family firms' unique long-term orientation and governance (Sirmon and Hitt, 2003, Aronoff and Ward, 1995). In essence, family members who focus on the longevity of the family business with a desire to pass it on to next generations tend to provide low cost and 'patient' capital to family firms, especially in a low financial liquidity situation (Aronoff and Ward, 1995). Based on previous studies, I determine financial crisis period that is from 2008 to 2009 (Lins et al., 2013, Aldamen et al., 2020). To achieve the reliability of

analysis, I control for crisis. The results show that the coefficient of *Family_firm* is positive and significant at the 1% level, suggesting that including external financial shocks does not overstate the effect of family firm on leverage (**Table 2-5**).

[Insert **Table 2-5** here]

Endogeneity

There may be a potential endogeneity problem in the study. The study is safe from reverse causality problem since the panel structure of the data allows employing lagged variables for the family firm dummy variable. Using lagged variables cannot completely solve the endogeneity problem but it is suitable to alleviate the concern of reverse causality (Ampenberger et al., 2013). However, the results may be biased due to the presence of omitted variables that affect both leverage and family firm status. To further address the endogeneity issue, I apply a two-stage least square instrumental variable (2SLS IV) estimation. I follow Wooldridge (2010) for models that have binary endogenous explanatory variable. In the first step, I estimate a binary response model by maximum likelihood; in the second step, I use the obtained fitted probability as an instrument. Wooldridge (2010) show that this approach generates consistent coefficients, as well as correct standard errors.

I use the trust level in family as an instrumental variable for family firm since trust is central to family businesses (Steier, 2001). A good instrumental variable is expected to be correlated with family firm status, but unlikely to have direct impact on leverage. Sundaramurthy (2008) show that the existence of family firms is not purely based on economic optimization, but instead the outcome of trust. Banfield (1967) find that "amoral familism" is one of the main reasons that

affect the structure of a firm. Therefore, I expect an association between the trust level in family and family firm status. On the other hand, in a society where people are taught to trust only their family networks, they are also taught to distrust people outside the family (Fukuyama, 1995). In other words, there is a potential trade-off between the trust among kinship networks and trust in society at large (Banfield, 1967). Notably, prior study provides evidence that social trust has influence on the firm performance and leverage (Porta et al., 1996, Levine et al., 2016, Allen et al., 2018). In addition, Huang et al. (2021) and Xia et al. (2021) show that social trust influences the corporate leverage adjustment speed to target leverage. Therefore, I argue that trust in family may have indirect influence on the firm leverage through social trust. In conclusion, trust in family seems a good instrumental variable due to potential direct impact on family firm status while indirect impact on firm leverage.

First, I run a logit model that includes the trust level in family, *Trustinfamily*, and all explanatory variables used in the main model to obtain fitted probability for family firms. Second, I run IV estimation with instrumental variable which is fitted probability. Follow Alesina and Giuliano (2011), I measure the trust in the family based on the following question in the World Value Survey: *"Could you tell me how much you trust your family?"*, where the answer could take the following values: "Trust them completely" (5), "Trust them a little" (4), "Neither trust or distrust them" (3), "Do not trust them very much" (2), and "Do not trust them at all" (1).

Table 2-6 reports the results of logit model estimation in column 1, the results of the first-stage of 2SLS IV regressions in column 2, and the results of second-stage of 2SLS IV regressions in columns 3 and 4 for long-term and total market-debt ratio, respectively. Column 1 shows that the coefficients of *Trustinfamily* are negative and significant at the 1% level. Family

firms in our sample are large publicly traded, while the high level of trust in family is considered as a competitive advantage for family businesses in the early stages, often deteriorating as the firm grows (Sundaramurthy, 2008, Fukuyama, 1995). The results are supported by Steier (2001) who claims that *"what was once a very resilient trust is replaced by an atmosphere of fragile trust".*

Column 2 presents the results of first-stage regression of IV estimation. I conduct two tests that provide support for the choice of instrument and report the results in the bottom of Column 2 in **Table 2-6**. I use the Durbin-Wu-Hausman (DWH) chi-squared test to test whether the family firm is endogenous. The null hypothesis is that the family firm is exogenous with respect to the leverage and the rejection of this hypothesis implies that the family firm is indeed endogenous and validates the IV approach. To test whether the instrument is relevant, I calculate the Cragg-Donald statistics, which is 286.690, higher than the 11.04 critical value reported by Stock and Yogo (2005). This implies that the instrument for family firm is not weak.

Columns 3 and 4 of **Table 2-6** show the regression results from the second-stage. The coefficients of *Family_firm* are positive and statistically significant at the 1% level, suggesting that family firms have a higher level of long-term debt and total debt than nonfamily firms, reinforcing our earlier findings.

[Insert **Table 2-6** here]

2.5   Conclusion

I investigate how family firm status affects the firm's financing decisions. I study 872 largest publicly traded firms in East Asian countries including Hong Kong, South Korea, Taiwan, Indonesia, Malaysia, Philippines, Singapore, and Thailand. The findings show that family firms borrow more than nonfamily firms during the period of 2000 to 2017. The results imply that the

dilution entrenchment may lead family firms to rely more on debt as debt is an effective tool to raise capital without ownership dilution. Family firms are driven by control power motivation. Furthermore, the findings indicate that the positive association between family firms and leverage is stronger in countires with weak creditor rights protection. This positive relationship is also stronger in societies where religion is influential. The results are robust to family firm classification, alternative leverage measurements and endogenieity.

Appendix A: Definition of variables and sources

Variable	Definition	Source
Panel A: Leverage ratio		
Lev_ld	Ratio of long-term debt to market value of a firm. Market value of a firm is defined by market value of equity plus book value of total debt.	DataStream
Lev_td	Ratio of total debt (long-term plus short-term debt) to market value of a firm. Market value of a firm is defined by market value of equity plus book value of total debt.	DataStream
Panel B: Firm characterisitcs		
Family_firm	A dummy variable equal 1 if the largest ultimate shareholder is an individual or a family, otherwise 0.	Carney and Child (2013)
Fimr_size	Natural logarithm of total assets.	DataStream
Tangibility	Ratio of net property, plant, and equipment (PPE) over to total assets.	DataStream
Profitability	Ratio of earnings before interest, tax, depreciation and amortization (EBITDA) over total assets.	DataStream
Growth_opp.	Ratio of total assets minus book value of equity plus market value of equity divided by total assets.	DataStream
Firm_age	The natural lograthim of the numbers of year from the establishment.	Carney and Child (2013)
Panel C: Formal and Informal Institutions		
Creditor_right	An index aggregating creditor rights, following La Porta et al. (1998). A score of one is assigned when each of the following rights of secured lenders is defined in laws and regulations: First, there are restrictions, such as creditor consent or minimum dividends, for a debtor to file for reorganization. Second, secured creditors are able to seize their collateral after the reorganization petition is approved, i.e. there is no "automatic stay" or "asset freeze." Third, secured creditors are paid first out of the proceeds of liquidating a bankrupt firm, as opposed to other creditors such as government or workers. Finally, if management does not retain administration of its property pending the resolution of the reorganization. The index ranges from 0 (weak creditor rights) to 4 (strong creditor rights).[10]	La Porta et al. (1998)
Legal_origin	Identifies the legal origin of the company law or commercial code of each country. Legal origin equal 1 if country's legal origin is common law, otherwise 0.	(La Porta et al. (1998))

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[10] The La Porta et al. (1996) measure of creditor rights is available for a single cross section of countries (year 1995). The Djankov et al. (2007) and the La Porta et al. (1996) measures are highly correlated. However, Djankov et al. (2007) improves on the La Porta et al.(1996) measure by providing a time series of this variable.

Buddhism	A dummy variable equal to 1 if more than 50 percent of population of a country follows Buddhism; otherwise 0.[11]	Central Intelligence Agency
Catholic	A dummy variable equal to 1 if more than 50 percent of population of a country follows Catholicism, otherwise 0.	Central Intelligence Agency
Islam	A dummy variable equal to 1 if more than 50 percent of population of a country follows Islam, otherwise 0.	Central Intelligence Agency
Trustinfamily	Trust level in family is the average score of all individual respondents in each country for the question: "Could you tell me how much you trust your family?" 1. "Trust them completely" – 5 scores; 2. "Trust them a little" – 4 scores; 3. "Neither trust or distrust them" – 3 scores; 4. "Do not trust them very much" – 2 scores; 5. "Do not trust them at all" – 1 score.	WVS

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[11] Except for Taiwan which has proportion of population follow Buddhism and Taoism are 35.3% and Taoist 33.2%, respectively. Buddhism and Taoism share common value and beliefs with strong emphases on collectivism and familial interests (Lee et al. 1994). Chang (2012) find that Buddhism and Taoism religions have significantly positive related. Therefore, we consider people follow Buddhism and Taoism in Taiwan as one group.
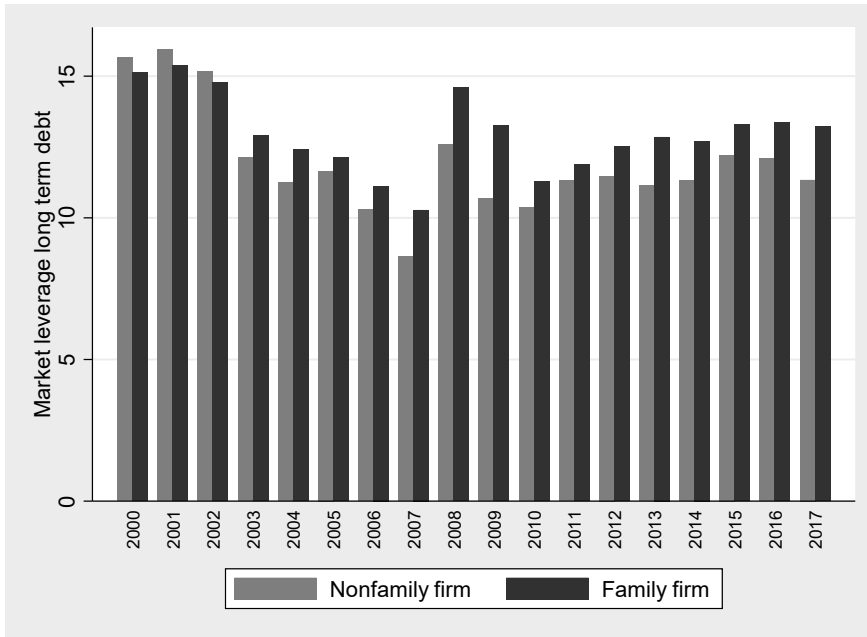
Figure 2-1: Long-term market-debt ratio of family firms vs. nonfamily firms over time
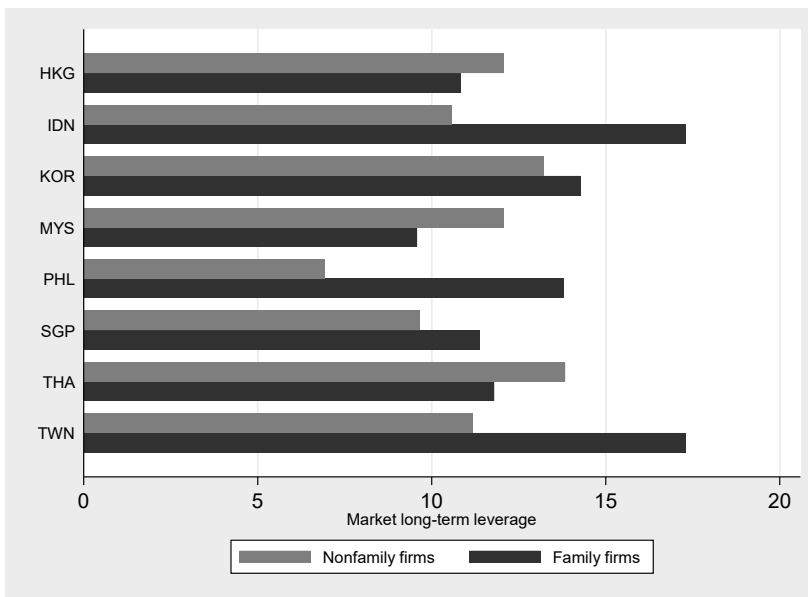
Figure 2-2: Long-term market-debt ratio of family firms vs. nonfamily firms by country
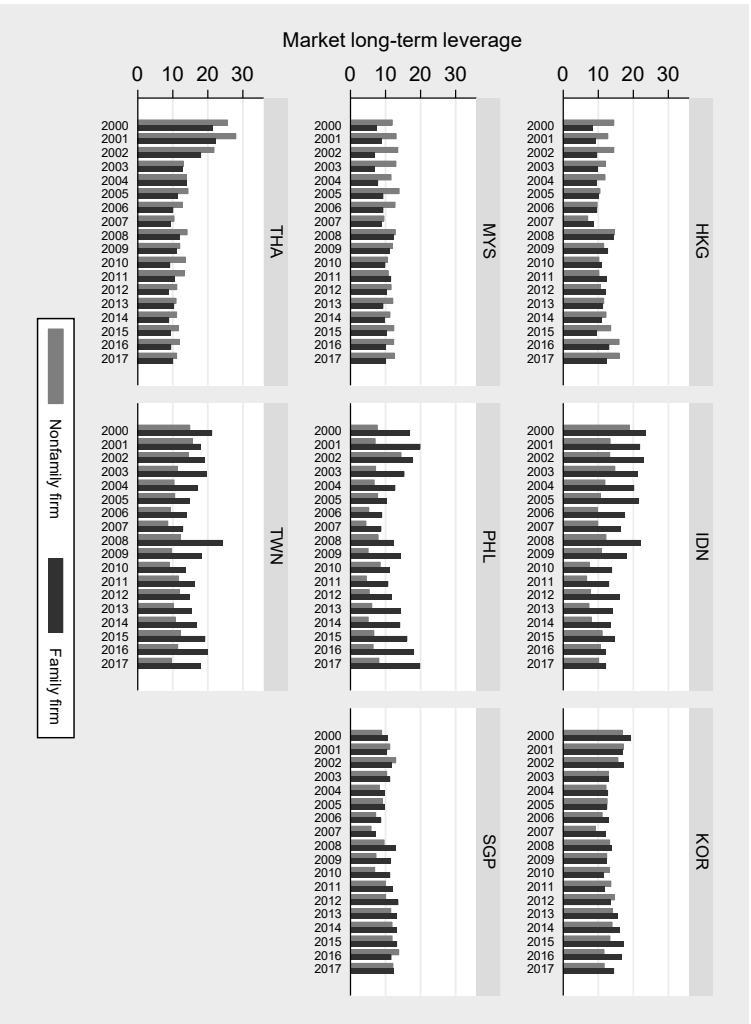
Figure 2-3: Long-term market-debt ratio of family firms vs. nonfamily firms over time by country

	Lev_ld	Lev_td	Family_firm	Firm_size	Tangibility	Q	ROA	Firm_age	creditor_right	legor_uk	Buddhism	Catholism	Islam
Lev_ld	1												
Lev_td	0.780***	1											
Family_firm	0.038***	0.055***	1										
Firm_size	0.303***	0.232***	-0.143***	1									
Tangibility	0.325***	0.266***	0.050***	0.105***	1								
Growth_opp	-0.293***	-0.386***	-0.063***	-0.154***	-0.082***	1							
ROA	-0.182***	-0.324***	-0.054***	0.033***	0.080***	0.401***	1						
Firm_age	0.021*	0.057***	0.113***	0.122***	-0.039***	-0.101***	-0.122***	1					
Creditor_right	-0.040***	-0.043***	0.018*	0.183***	-0.096***	-0.091***	-0.137***	0.089***	1				
Legal_origin	-0.045***	-0.075***	0.075***	-0.159***	-0.022*	-0.018*	-0.050***	-0.067***	0.515***	1			
Buddhism	-0.028**	-0.030***	-0.258***	-0.031***	-0.020*	0.032***	0.033***	-0.215***	-0.321***	0.139***	1		
Catholism	0.023**	0.027**	0.253***	-0.195***	0.029***	-0.01	-0.025**	0.105***	-0.553***	-0.274***	-0.231***	1	
Islam	0.008	-0.019*	0.088***	-0.130***	0.089***	0.083***	0.113***	-0.066***	-0.012	0.071***	-0.464***	-0.161***	1

Table 2-1: Correlation matrix

Table 2-2: Descriptive statistics

	All firms				Family firms		Nonfamily firms		
	Mean	*SD*	*Max*	*Min*	*Mean*	*SD*	*Mean*	*SD*	*T-Test*
Lev_ld	12.24	14.02	60.43	0.00	12.87	14.87	11.82	13.40	(4.38)***
Lev_td	23.08	19.95	76.46	0.00	24.37	20.77	22.21	19.34	(6.30)***
Firm_size	13.37	1.77	17.71	9.00	13.07	1.78	13.56	1.74	(16.59)***
Tangibility	37.29	22.63	89.16	0.24	38.65	23.25	36.38	22.17	(5.93)***
Growth_opp	1.45	1.05	7.35	0.45	1.38	1.04	1.50	1.04	(6.49)***
ROA	11.24	10.70	45.85	-30.33	10.60	10.90	11.67	10.55	(5.88)***
Firm_age	3.29	0.77	4.74	0.69	3.40	0.77	3.22	0.76	(13.46)***
N	15955				6391		9564		

This table reports results of ordinary least square (OLS) regressions. The dependent variable is long-term market debt ratio and total market debt ratio. A family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. Variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Numbers in the parentheses are standard errors clustered at the firm level. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Long-term market debt ratio				Total market debt ratio			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family_Firm	1.715***	5.388**	2.381***	2.586***	2.426**	6.247*	3.130**	3.568***
	(0.628)	(2.233)	(0.859)	(0.719)	(0.995)	(3.697)	(1.467)	(1.109)
FF_Creditorright		-1.358*				(1.414)		
		(0.817)				(1.319)		
FF_Legal			(1.203)				(1.271)	
			(1.244)				(2.000)	
FF_nonreligion				-2.946**				-4.703**
				(1.282)				(2.060)
Firm_size	2.592***	2.574***	2.582***	2.557***	2.940***	2.921***	2.929***	2.940***
	(0.196)	(0.196)	(0.197)	(0.195)	(0.287)	(0.287)	(0.288)	(0.292)
Tangibility	0.124***	0.123***	0.124***	0.126***	0.150***	0.148***	0.150***	0.152***
	(0.014)	(0.014)	(0.014)	(0.014)	(0.020)	(0.020)	(0.020)	(0.020)
Growth_opp	-1.800***	-1.826***	-1.805***	-1.818***	-3.760***	-3.787***	-3.766***	-3.778***
	(0.217)	(0.218)	(0.218)	(0.215)	(0.380)	(0.379)	(0.380)	(0.379)
Profitability	-0.212***	-0.209***	-0.211***	-0.195***	-0.478***	-0.475***	-0.476***	-0.452***
	(0.021)	(0.021)	(0.021)	(0.021)	(0.031)	(0.031)	(0.031)	(0.030)

Table 2-3: Firm leverage and family ownership at threshold 20% – OLS method

	Long-term market debt ratio				Total market debt ratio			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Firm_age	(0.332)	(0.280)	(0.308)	(0.343)	(0.111)	(0.057)	(0.086)	(0.178)
	(0.413)	(0.411)	(0.414)	(0.409)	(0.608)	(0.606)	(0.608)	(0.603)
Creditor_right	-5.054***	-4.327***	-4.852***	-2.300***	-7.969***	-7.212***	-7.756***	-3.772***
	(1.151)	(1.214)	(1.170)	(0.845)	(1.731)	(1.794)	(1.761)	(1.261)
Legal_origin	3.254***	3.079***	3.541***	1.338	4.112**	3.929**	4.415**	1.470
	(1.138)	(1.143)	(1.169)	(1.024)	(1.731)	(1.731)	(1.765)	(1.569)
Non_religion				1.085				3.487*
				(1.307)				(2.008)
Buddhism	-3.839**	-3.516**	-3.524**		-7.161***	-6.826***	-6.829***	
	(1.583)	(1.591)	(1.616)		(2.368)	(2.367)	(2.422)	
Catholic	-6.539**	-7.330***	-6.473**		-12.719***	-13.541***	-12.651***	
	(2.651)	(2.660)	(2.656)		(4.003)	(4.139)	(4.005)	
Islam	(1.105)	(1.053)	(0.984)		-3.875*	-3.820*	-3.748*	
	(1.304)	(1.307)	(1.320)		(2.033)	(2.034)	(2.051)	
Intercept	(7.370)	-9.169*	(8.161)	-15.365***	16.714**	14.859*	15.886*	1.778
	(5.354)	(5.441)	(5.433)	(4.093)	(8.389)	(8.488)	(8.462)	(6.522)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	12836	12836	12836	12836	12866	12866	12866	12866
N.clusters	872	872	872	872	872	872	872	872
Adjusted R^2	0.290	0.290	0.290	0.290	0.310	0.310	0.310	0.310

Table 2-3 (Cont.)

This table reports results of ordinary least square (OLS) regressions. The dependent variable is long-term market debt ratio (Column 1-4) and total market debt ratio (Column 5-8). A family firm is defined as a firm in which the largest shareholder who holds at least 10% of ownership is a family or individual. Variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Numbers in the parentheses are standard errors clustered at the firm level. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Long-term market debt ratio				Total market debt ratio			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family_Firm	1.302***	3.921***	0.813***	2.394***	1.856***	2.814**	1.086**	2.940***
	(0.227)	(0.827)	(0.307)	(0.258)	(0.320)	(1.191)	(0.447)	(0.359)
FF_Creditorright		-0.989***				(0.362)		
		(0.307)				(0.436)		
FF_Legal			0.944**				1.488**	
			(0.454)				(0.643)	
FF_nonreligion				-3.420***				-4.133***
				(0.487)				(0.689)
Firm_size	2.582***	2.570***	2.594***	2.567***	2.991***	2.987***	3.011***	3.015***
	(0.075)	(0.075)	(0.075)	(0.075)	(0.103)	(0.103)	(0.103)	(0.103)
Tangibility	0.127***	0.126***	0.127***	0.128***	0.157***	0.157***	0.157***	0.159***
	(0.006)	(0.006)	(0.006)	(0.006)	(0.008)	(0.008)	(0.008)	(0.008)
Growth_opp	-1.665***	-1.687***	-1.657***	-1.683***	-3.537***	-3.545***	-3.523***	-3.547***
	(0.097)	(0.098)	(0.097)	(0.097)	(0.154)	(0.154)	(0.154)	(0.154)
Profitability	-0.205***	-0.203***	-0.206***	-0.190***	-0.471***	-0.470***	-0.472***	-0.448***
	(0.013)	(0.012)	(0.013)	(0.012)	(0.017)	(0.017)	(0.017)	(0.017)

Table 2-4: Firm leverage and family ownership at 10% threshold – OLS method

	Long-term market debt ratio				Total market debt ratio			
	1	2	3	4	5	6	7	8
Firm_age	(0.172)	(0.139)	(0.183)	(0.133)	0.022	0.034	0.005	(0.004)
	(0.160)	(0.160)	(0.160)	(0.159)	(0.222)	(0.222)	(0.222)	(0.219)
Creditor_right	-4.496***	-3.936***	-4.681***	-2.380***	-7.428***	-7.223***	-7.719***	-4.113***
	(0.423)	(0.450)	(0.437)	(0.310)	(0.583)	(0.621)	(0.600)	(0.425)
Legal_origin	2.896***	2.803***	2.608***	1.301***	4.022***	3.988***	3.566***	1.856***
	(0.406)	(0.406)	(0.419)	(0.368)	(0.563)	(0.563)	(0.585)	(0.505)
Non_religion				1.821***				4.384***
				(0.512)				(0.707)
Buddhism	-3.296***	-3.126***	-3.588***		-6.783***	-6.721***	-7.242***	
	(0.579)	(0.580)	(0.601)		(0.817)	(0.819)	(0.846)	
Catholic	-4.943***	-5.470***	-5.119***		-11.143***	-11.337***	-11.418***	
	(0.981)	(0.989)	(0.991)		(1.359)	(1.385)	(1.368)	
Islam	-0.823*	-0.813*	-0.971**		-3.946***	-3.942***	-4.180***	
	(0.478)	(0.478)	(0.491)		(0.684)	(0.684)	(0.696)	
Intercept	-8.243***	-9.611***	-7.539***	-14.813***	9.237***	8.735***	10.333***	(4.065)
	(2.336)	(2.369)	(2.376)	(1.978)	(3.124)	(3.175)	(3.171)	(2.581)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effects	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	12,559	12,599	12,599	12,599	12,629	12,629	12,629	12,629
Number of cluster	872	872	872	872	872	872	872	872
Adjusted R²	0.290	0.290	0.290	0.290	0.310	0.310	0.310	0.310

Table 2-4 (Cont.)

Table 2-5: Firm leverage and family ownership - crisis

This table reports results of ordinary least square (OLS) regressions. The dependent variable is long-term market debt ratio (Column 1-4) and total market debt ratio (Column 5-8). A family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. Variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Numbers in the parentheses are standard errors clustered at the firm level. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Long-term market debt ratio (1)	Total market debt ratio (2)
Family_firm	1.715***	2.426**
	(0.628)	(0.995)
Firm_size	2.592***	2.940***
	(0.196)	(0.287)
Tangibility	0.124***	0.150***
	(0.014)	(0.020)
Growth_opp	-1.800***	-3.760***
	(0.217)	(0.380)
Profitability	-0.212***	-0.478***
	(0.021)	(0.031)
Firm_age	-0.332	-0.111
	(0.413)	(0.608)
Crisis	-1.054	-5.173***
	(0.735)	(0.971)
Creditor_Right	-5.054***	-7.969***
	(1.151)	(1.731)
Legal_origin	3.254***	4.112**
	(1.138)	(1.731)
Buddhism	-3.839**	-7.161***
	(1.583)	(2.368)
Catholic	-6.539**	-12.719***
	(2.651)	(4.003)
Islam	-1.105	-3.875*
	(1.304)	(2.033)
Intercept	-7.370	16.714**
	(5.354)	(8.389)
Industry fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Obs.	11928	11957
N.clusters	872	872
Adjusted-R²	0.170	0.210

Table 2-6: Firm leverage and family ownership – IV method

This table reports results of logit model in Column 1, and instrumental variable (IV) in columns 2 for first-stage regression, column 3 and 4 for second-stage regression with long-term market debt ratio and total market debt ratio as dependent variable, respectively. We investigate the impact of family firms on leverage for a sample of over more than 13,000 firm-year observations from eight East Asian countries during the period from 2000 to 2017. The cut-off level of ownership is 20%. A family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The dependent variable is long-term market-debt ratio and total market-debt ratio in column 3 and 4, respectively. *Fitted_Pro_FF* is the fitted probability of a family firm from logit model. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Numbers in the parentheses are standard errors clustered at the firm level. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Logit	First_stage IV	Second-stage IV	
	Dependent variable: Family_firm	Dependent variable: Family_firm	Long-term market debt ratio	Total market debt ratio
	(1)	(2)	(3)	(4)
Family_firm			1.280***	1.598***
			(1.462)	(2.031)
TrustinFamily	-32.401***			
	(1.588)			
Fitted_Pro_FF		0.919***		
		(0.046)		
Firm_size	-0.056***	-0.003	2.899***	3.241***
	(0.015)	(0.003)	(0.092)	(0.126)
Tangibility	0.006***	0.000	0.112***	0.139***
	(0.001)	0.000	(0.006)	(0.008)
Growth_opp	-0.138***	-0.009*	-1.470***	-3.315***
	(0.022)	(0.005)	(0.139)	(0.192)
Profitability	-0.002	0.000	-0.212***	-0.479***
	(0.002)	0.000	(0.013)	(0.018)
Firm_age	0.054*	-0.001	-0.508***	-0.390
	(0.030)	(0.006)	(0.187)	(0.257)
Creditor_Right	0.150**	0.002	-4.926***	-7.779***
	(0.076)	(0.016)	(0.455)	(0.628)
Legal_origin	0.767***	0.010	1.608***	2.164***
	(0.081)	(0.017)	(0.493)	(0.682)
Buddhism	-1.215***	-0.014	-1.755**	-4.517***
	(0.118)	(0.024)	(0.701)	(0.967)
Catholic	3.341***	0.038	-11.307***	-18.403***
	(0.190)	(0.043)	(1.288)	(1.776)

Table 2-6 (Cont.)

	Logit	First_stage IV	Second-stage IV	
	Dependent variable: Family_firm	**Dependent variable: Family_firm**	**Long-term market debt ratio**	**Total market debt ratio**
	(1)	(2)	(3)	(4)
Islam	-0.430***	0.005	-1.262**	-4.024***
	(0.095)	(0.019)	(0.545)	(0.752)
Intercept	26.264***	0.041	-18.131***	-2.879
	(1.372)	(0.078)	(2.344)	(3.227)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Obs.	13067	12132	11928	11957
N.clusters				
Adjusted-R²		0.210	0.170	0.210
Durbin-Wu-Hausman (DWH) (P-value)		0.000		
Cragg-Donald		286.690		

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CHAPTER 3: FAMILY FIRMS AND THE COST OF BORROWING. EMPIRICAL EVIDENCE FROM EAST ASIA

Abstract

We investigate the impact of family firms on the cost of borrowing in East Asia. We find consistent evidence that family firms pay significantly higher loan spreads than nonfamily firms. This effect is stronger in environments with weak investor protection. Furthermore, covenants help reduce the cost of debt while collateral is embedded in relatively riskier borrowers. We also find that small, highly leveraged borrowers pay higher loan spreads, while they are lower for firms with more tangible assets and lower probability of default risk. Our results survive several robustness checks related to family firm classification and endogeneity issues.

Keywords: Family firm, loan spread, East Asia.
JEL classification: G21, G32.

3.1   Introduction

While extend literature has focused on the effects of family control on firms from the perspective of shareholders (Dawson et al., 2018, Villalonga and Amit, 2006), the influence of family control from the perspective of creditors is scarce (Murro and Peruzzi, 2019, Aslan and Kumar, 2012), despite the fact that financial institutions provide the majority of external financing in most economies across the world (Demirgüç-Kunt and Levine, 2004). This is even more important in East Asia where banking plays an important role across Asia's financial systems. It is reported that bank financing covers by far the largest share of corporate financing in emerging Asia, accounting for 123.6% of corporate financing (as a percentage of GDP) in the region in 2018. Asia's cross-border bank credit continues to soar from $849 billion in 2013 to $1,029 billion in 2018 (The Asian Economic Integration Report, 2019-2020).

Theories provide competing predictions on the relationship between family ownership and the cost of debt. On the one hand, resource-based view which considers family as a source of competitive advantage, argues that firm-creditor agency conflict is less severe in family firms. Family firms with long-term survivorship and reputational concerns are less likely to strategically default. Founding families with large block holdings and undiversified investments have a lower preference for risky high-growth investments (Carney, 2005), which is in alignment with creditors' interests (Anderson et al., 2012). In addition, family firms are able to nurture long-lasting relationships with banks (Cucculelli et al., 2016, Ellul et al., 2007), which mitigates asymmetric information issues. These lead to a lower cost of debt for family firms.

On the other hand, cultural theory suggests that strong family values may generate disadvantages for family firms in the borrower-creditor relationship. Family owners may prefer to maximize their utility rather than firm value. The entrenchment effect from family

management may lead to higher opacity (Murro and Peruzzi, 2019), which increases information asymmetry problems. Furthermore, a high ownership concentration in family firms may lead to increased expropriation risk of minor shareholders. These are negatively perceived by creditors (Aslan and Kumar, 2012). Hence, family firms may suffer a higher cost of debt relative to nonfamily firms.

Empirical studies show that the relationship between the cost of debt and family ownership depends on various settings, at the country level and/or institutional level. Lin et al. (2011) who study the cost of borrowing in 22 counties argue that excess control rights in family firms, which facilitates moral hazard, will increase monitoring costs and credit risk. They find that family firms suffer a higher cost of debt compared to nonfamily firms. Similarly, Gao et al. (2020) find that Chinese listed family firms have higher bond-yield spreads due to the risk of expropriation and financial reporting quality. Boubakri and Ghouma (2010) provide similar results in an international context. In contrast, Anderson et al. (2003) find that family firms in S&P 500 are associated with a lower cost of debt since family firms concern about survival and reputation that help to reduce agency conflicts with creditors. In line with Anderson et al. (2003), Swanpitak et al. (2020) find that family firms in Thailand have a lower cost of debt compared to nonfamily firms, which is a result of fostering and nurturing the strong and trustworthy relationships with creditors. It is argued that the relationship between the cost of debt and family ownership may depend on the institutional setting.

The contextual environment in East Asia is promising for studying family firms due to considerably different features from Western. Particularly, informal institutions play significant role in shaping individuals' behaviors where formal system is still constructed (Helmke and Levitsky, 2004). In addition, despite of globalizing, each country is still distinct in terms of

culture and socio-political environment (Sharma and Chua, 2013). Especially, religion as one of the informal systems are very diverse in this region (Dinh and Calabrò, 2019). Regarding to formal system, while generally the formal institutional environment in this region is weak and arm-length market driven factors are deficient, countries within the region are at varying stages of institutional development, leading the role of family in voiding the shortcomings of markets varies.

Some specific features of family firms can be fostered stronger while others are mitigated depending on the institutional environment in which family firms operate. Studying family firms in cross East Asian countries in the context of both formal and informal institutions contributes to a better understanding of family firms in East Asia. In weak legal and institutional environments where commitment mechanisms for avoiding moral hazard problems are less credible, we expect that the family firms' characteristics such as preference for private interest of control (Burkart et al., 2003), incentives to expropriate minority shareholders (Djankov et al., 2008, Jensen and Meckling, 1976, Claessens et al., 2002), and management entrenchment (Chen et al., 2014) may be amplified.

Besides, given that religion in East Asia is very influential within society (Clobert, 2020), we expect that the risk of opportunistic behaviors caused by family may be reduced due to the influence of religiosity. Religiosity can directly enhance business ethics and constrain opportunistic behaviors in business contracting and financial reporting (McGuire et al., 2012). Chen et al. (2016) show that religious social norms represent a mechanism for reducing costly agency conflicts, leading to a lower cost of debt. Motivated by Dinh and Calabrò (2019), we take into account religion in investigating the impact of family ownership on the cost of debt.

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We focus on the impact of family involvement on the cost of debt in East Asia including South Korea, Taiwan, Indonesia, Malaysia, Singapore, Philippines, Thailand, and Hong Kong[12]. Our data spans from 2000 to 2017 and covers more than 1,200 large bank loans. The main findings indicate that family firms bear a higher cost of debt than nonfamily firms. The impact of family firms on the external financing cost is stronger in weaker institutional environments. The covenants help reduce the cost of debt while collateral is embedded in relatively riskier borrowers. We also find that small, highly leveraged borrowers pay higher loan spreads, while they are lower for firms with more tangible assets and lower probability of default risk.

Our paper contributes to family business and finance literature in different ways. First, we enrich family business literature by adding new lens of Asian family firms to Western skew in our current knowledge about these firms (Sharma and Chua, 2013). There has been a Western slant in the current literature on family enterprises, observed that 73% of family business research focuses on North American and European family enterprises (De Massis et al., 2012). Therefore, it is worth to have more understanding contextual nuances on the Eastern region to contribute to new knowledge about family firms around the world. This is important since family firms are not only the dominant but also a long-lasting organizational form in East Asia, the world's fastest-growing area (Claessens et al., 2000, Carney and Child, 2013, The Economist 2015), but the number of studies on 'Asian' family firms is still limited (De Massis et al., 2012, Sharma and Chua, 2013). In addition, the contextual environment in East Asia is unique, revealing of a convergence-divergence paradox (Steier, 2009). It is globalizing, whilst still persisting unique institutional contexts. Therefore, studying family firms in East Asia contributes to the generality of knowledge about family business around the world.

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[12] We acknowledge that Hong Kong is a special administrative region rather than a country, but to preserve the continuity of the discussion we refer to it as a country (Carney and Child, 2013).

Second, we contribute to family firms literature by studying the impact of family firms from the perspective of creditors in East Asia, given that Asian banks have been emerging lenders to the region in recent years beside traditional lenders from the United Kingdom, the United States, and the European Union (Nguyen et al., 2021). This is consistent with the efforts of East Asian countries to promote intra-regional financial integration starting with the Chiang Mai Initiative in 2000, the Asian Bond Markets Initiative in 2003, and culminating with the formation of the ASEAN Economic Community in 2015. The share of Asian banks rose from 16% in 2007 to 25% in 2018 (Nguyen et al., 2021).

Third, following the growing area of finance literature which suggests that culture plays an important role in financial outcomes, and motivated by Dinh and Calabrò (2019), we take into account the context of diverse religions in East Asia due to the significant divergence and influence of religion in this society (Clobert, 2020), e.g. Islam (Indonesia, Malaysia), Buddhism (Thailand, Taiwan) and Christianity (Philippines). Indeed, religious orientation is a common informal institution considered in credits markets (Chui et al., 2016). Dinh and Calabrò (2019) argue that studying family business in Asia should look further into the religious elements since family firms have great incentives in pursuing socioemotional wealth (SEW) (Gómez-Mejía et al., 2007, Jiang et al., 2015) and religion may serve as a key driver of SEW. Extending the investigation of family firms to countries with contrasting religions help provide better understandings of family firms (Soleimanof et al., 2018). To the best of our knowledge, this is the first cross-country study on family firms in East Asia that investigates the effect of family ownership on the cost of debt in the context of joint effect of formal and informal institutions.

The rest of the paper is structured as follows. Section 2 reviews the literature and proposes hypothesis. Section 3 presents data and methodology. Section 4 discusses the results. Section 5 provides the conclusion.

3.2   Literature review and hypotheses development

3.2.1   Low shareholders-creditors agency cost in family

From the point of view of the resource-based framework, the unique features of family firms align with the interest of creditors (Barney, 1991). When creditors perceive greater goal alignment with shareholders, the cost of debt could be lower (Anderson et al., 2003). Family owners as block holding and undiversified investors are less likely to pursue risky investments, reducing the risk of asset substitution for creditors (Carney, 2005). In addition, with objectives of transgenerational continuity, family reputation (Berrone et al., 2010) and social capital (Arregle et al., 2007), family firms should comply more with debt commitments. Furthermore, considering a family firm as a galaxy to pass to next generations, family members provide "patient capital" to firms (Bertrand and Schoar, 2006), reducing the risk of default for creditors. Managers in family firms usually affiliated with founding families are less likely to overinvest compared to managers with myopic view of nonfamily firms. In addition, family firms can enjoy a lower cost of debt which benefits from the long-lasting closer relationships with creditors (Cucculelli et al., 2016). The impact of family involvement on business positively perceived by creditors could lead to a lower cost of debt for family firms.

3.2.2   High shareholders – creditors agency cost in family

In contrast with a positive view of family involvement, the cultural theory suggests a higher shareholder-creditor agency cost in family firms. This leads to a higher cost of debt for

family firms. Family firms have a preference for private interest of control (Burkart et al., 2003) and capacity of expropriating minority shareholders and outside investors' wealth (Djankov et al., 2008, Jensen and Meckling, 1976, Claessens et al., 2002), particularly in countries with weak investor protection (Ellul et al., 2007, Djankov et al., 2008, Lins et al., 2013). Anderson et al. (2009) and Chen et al. (2014) find that family firms are more opaque than nonfamily firms. Family language provides an ideal environment for informational asymmetry. The greater the information asymmetry is, the more private wealth founding families can enhance (Lang et al., 2004). More opaque information prevents outside investors from investing and increases the cost of external finance (Anderson et al., 2009, Ma et al., 2017, Myers and Majluf, 1984, Ferri and Murro, 2015). Furthermore, with private interest of control, family firms have more motivations for entrenchment and nepotism (Friedman et al., 2003, Pérez-González, 2006). Entrenchment theory suggests a negative relationship between firm performance and founding family ownership (Anderson et al., 2009, Claessens et al., 2002). In addition, the ownership concentration and dominant position of controlling families provide incentives and capacity to expropriate minority shareholders (Djankov et al., 2008, Jensen and Meckling, 1976), leading to poorer performance of family firms. These are negatively perceived by creditors, causing a higher cost of external finance for family firms (Ferri and Murro, 2015, Berger and Udell, 2006).

3.2.3 Hypothesis development

Firms exhibit different behaviors when operating in different social environments (Hilary and Hui, 2009), and family firms are no exception. In addition, family firms' behaviors are influenced by multiple institutional logics (Aparicio et al., 2017). We argue that family firms need to seek the fit between business activities and the different conflicting institutional logics such as the state- or religion-based logics. On the one hand, with weak legal and institutional

environments of East Asia, we argue that creditors bear higher risk when lending to family firms. The likelihood of minority shareholder wealth expropriation is high in a family firm due to weaker protection of investor rights (Claessens et al., 2002, Villalonga and Amit, 2006). Creditors may face corporate credit risk caused by tunneling and manipulation by dominant shareholders in debt restructuring process (John et al., 2003, Gilson, 2005, Jiang et al., 2010). In addition, the opacity caused by the entrenchment effect from family management increases information asymmetry problems (Murro and Peruzzi, 2019, Ma et al., 2017); as a result, creditors face more asymmetical information when dealing with family firms (Anderson et al., 2009, Chen et al., 2008). These are negatively perceived by creditors (Aslan and Kumar, 2012), and may lead to increased cost of debt for family firms relative to firms.

On the other hand, family firms are likely to produce less risk of opportunistic behaviors derived from family management due to religious influence. Theoretically, the religiosity is likely to positively associate with higher ethical standards and can play a key social role to constrain opportunistic behaviors of managers (Weaver and Agle, 2002, McGuire et al., 2012, Grullon et al., 2009). The higher ethical standards and strong self-discipline may mitigate the risk of engaging in fraudulent activities that jeoperdize the wealth of the debt holders (McGuire et al., 2012). In addition, many studies find a positive relationship between religiosity and risk aversion (Miller and Hoffmann, 1995, Dehejia et al., 2007). Risk aversion and long-term survivorship of family firms may reduce likelihood of investing in risky projects, which is aligned with creditors' interest. This reduces the agency costs between creditors and family firms.

However, while it is thoroughly agreed that the weak legal and institutional environments in East Asia motivate family to be more active to take advantages of the shortcomings of the institution frictions, the empirical evidence on reducing unethical behaves of firms due to religious concerns is not clear (Van Buren III et al., 2020, Vitell, 2009). Soleimanof et al. (2018) illustrate that family business assigns "different weights for different logics across different circumstances" (p.10). We argue that family firms' behaviors to fit the state-logic, formal institutions, are likely to be convergent, meanwhile their behaviors to fit the religion-based seem being divergent. The explanation is that while laws are equally effective to all firms and organizations, ethical norms are more specific to the circumstance faced by their members (Sinclair, 1993) or depend on the deductive analogy (Mansour et al., 2015). Therefore, we argue that in the multiple or even conflicting logics, creditors with conservative perspectives are likely to skew the negative impacts of family involvement which are fostered in weak investor protection institutions. We hypothesize that:

Hypothesis 1: Family firms suffer a higher cost of debt than nonfamily firms.

3.3   Methodology

In this section, we describe data collection, main variables, and model specification.

3.3.1   Data collection

First, we use ultimate beneficial ownership data from Carney and Child (2013). The data set provides the ultimate ownership of the largest 1387 publicly-traded firms (in terms of capital capitalization) in 9 East Asian countries including Japan, South Korea, Taiwan, Hong Kong, Singapore, Malaysia, Indonesia, the Philippines, and Thailand.[13] We exclude all Japanese

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[13] Carney and Child (2013) investigate the ultimate ownership of the largest 200 publicly-traded firms (in terms of market capitalization) from each of the countries' respective stock exchanges at the end of the calendar year 2008.

corporations to avoid outlier effects as Japanese firms are distinctive from the rest of the firms in East Asia.[14] Then, we exclude financial institutions to follow the current literature (Lin et al., 2011, Ma et al., 2017). The number of firms after excluded reduces to 872 firms. We obtain and calculate additional information about these firms from Thomson Reuters DataStream Advance on firm characteristics, such as firm size, profitability, tangibility, etc.

To track for the change in the type of ownership structure, we use M&As data from Bloomberg for the period 2000 to 2017. Firm-year observations of those firms that are targets in M&A transactions for which we cannot determine ultimate ownership after M&A are excdued.

We next check the Dealscan database for available loan contract information in the 8 countries from 2000 to 2017. Dealscan provides deal-level data in each year, and various terms of the loans at origination, such as the loan spread, the maturity of the loan, the size of the loan, and the purpose of the loan. We use bank loans denominated in local currencies or either U.S. dollars, then convert the local currencies into U.S. dollars based on the exchange rate provided by Dealscan.

Finally, we merge data on loan contracts from Dealscan with ultimate ownership data of firms from Carney and Child (2013). We end up with 1,463 loan contracts during period from 2000 to 2017.

3.3.2 Variables

Loan spread

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[14] Having widely dispersed ownership structures, the separation of ownership and management is more important in Japanese firms than in East Asian economies (Claessen et al., 2002). The largest shareholdings in Japanese firms are widely held by financial institutions, which is very different from many economies in the region. More importantly, financial institutions and their affiliated firms often cooperate to influence the governance of corporations, which is difficult to capture using formal ownership data.

To gauge the cost of debt, we use the natural logarithm of loan spread.[15] Using natural logarithm help mitigate the effect of skewness in the data, following prior literature (Lin et al., 2011, Chava et al., 2009, Graham et al., 2008). Specifically, we use all-in-drawn spread measured in basis points over the London Interbank Offered Rate (LIBOR). This is LIBOR equivalent on a loan plus origination fees. Thus, it provides an all-inclusive measurement of loan pricing at origination (Bharath et al., 2011).

Family firm

Family firm is our main explanatory variable of interest. We follow one of the most common approaches to distinguish a family firm from others based on ownership (Claessens et al., 2000, Carney and Child, 2013, O'Boyle et al., 2012, La Porta et al., 1999, Faccio and Lang, 2000). A firm is defined as a family firm if family members represent the largest number of voting shareholders and hold at least 20 percent of ownership.[16]

Control variables

We control for a variety of factors that might affect loan pricing. These factors include borrower characteristics, loan characteristics, and country-level factors.

Firm-specific characteristics: We control for borrower size, leverage, profitability, asset tangibility, Q, and default risk. The current literature has shown that small firms face more information asymmetry on the credit markets due to their opacity. As a result, smaller firms should suffer from higher loan spreads, other things equal (Ferri and Murro, 2015, Guiso and Minetti, 2010, Petersen and Rajan, 1994). Hence, we control for *Firm_size*, measured as the

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[15] Detailed definitions for all the variables used in the paper are provided in Appendix B.
[16] We use the cut-off value of 10 percent of ownership for robustness checks.

natural logarithm of total assets, following Petersen and Rajan (1994). Next, consistent with previous studies, we expect that profitable and low-leverage firms have lower loan spreads because they have lower probabilities of default (Lin et al., 2011, Murro and Peruzzi, 2019, Ferri and Murro, 2015, Chava et al., 2009). Thus, we include *Profitability*, measured by earnings before interest, tax, depreciation and amortization (EBITDA) over total assets and *Leverage*, measured as total debt divided by the sum of total debt and market value of equity. We control for *Tangibility*, measured by property, plant and equipment (PPE) over total assets. Tangible assets are often used as pledgeable assets as they have more value than intangible assets in financial distress (Almeida and Campello, 2007, Murro and Peruzzi, 2019), helping creditors to have high recovery values in default states. Consequently, creditors may offer lower spreads on loans for firms which have a high level of tangible assets (Lin et al., 2011, Kim et al., 2011, Zou and Adams, 2008). Following Lin et al. (2011), we control for the market-to-book ratio or Q, measured as total assets minus book value of equity plus market value of equity divided by total assets, as a proxy for additional value that is left to creditors in default states (Graham et al., 2008). Finally, we proxy of default risk with the Altman Z-score (Altman, 2005) which is negatively associated with default risk.[17]

Loan-specific characteristics[18]: Strahan (1999) finds that creditors often provide smaller, secured by collateral, covenants, and short maturity loans to borrowers that exhibit larger information asymmetry. We control for size of loans, *Loan_size*, measured as natural logarithm of loan amount since banks may achieve the economies of scale. If so, the loan size should have negative relationship with the loan spreads. Since the higher credit risk is associated with longer

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[17] Prior studies that use the Altman *Z*-score as a measure of default risk include Chava et al. (2009), Aslan and Kumar (2012), and D'Aurizio et al. (2015).
[18] These variables are frequently used by prior empirical works on bank loan pricing Chava et al. (2009), Aslan and Kurmar (2012), Graham et al. (2008) Hoffmann and Kleimeier (2019).

maturities, we control for loan maturity, *Loan_maturity*, measured by natural logarithm of the numbers of months from the intercept day to expired day of a loan facility. We also use dummy variables to control for the purpose of loans (working capital or general corporate purpose, refinancing, capital expenditures, acquisition, commercial paper backup, and others). We use dummy variables to control for covenant, *Covenant*, and collateral, *Secured*, since these terms are often used in loan agreements to monitor borrowers and protect creditors (Strahan, 1999). Finally, we use prior relationship dummy variable, *Prior_rel,* to control for the relationship between firms and creditors as lending relationship helps reduce information asymmetry through information gathered over time (Berger and Udell, 1995, Bharath et al., 2011).

Country-level factors: Existing literature shows that institutional environment should have an impact on the shareholder-debtholder agency conflicts (Ellul et al., 2007, Claessens et al., 2000, Durnev and Kim, 2005). Qian and Strahan (2007) argue that stronger creditor protection provides greater bargaining power and ability to take control of firms and force repayment in case of default; in turn, creditors face less risk, and reduce the cost of debt. Among institutional environment factors, we control for creditor rights as legal creditor protection is the most important determinant of the quality of contracting environment between shareholder and creditor (Qian and Strahan, 2007, Bae and Goyal, 2009, Godlewski, 2020). We also controlled for GDP per capita which is a proxy of the economic development degree. La Porta et al. (1998) show that laws and their enforcement vary across country as a function of GDP per capita.

In addition, prior research has shown that firms' behaviors are also influenced by religion-based logics (Zhao and Lounsbury, 2016, Thornton et al., 2012). We consider the diversity of religions in the region. Therefore, we control for different religions including

Buddhism, Catholic and Islam by using dummy variables. *Buddhism* equals 1 if more than 50 percent of population of a country follows Buddhism, otherwise 0.[19] *Catholic* equals 1 if more than 50 percent of population of a country follows Catholic, otherwise 0. *Islam* equals 1 if more than 50 percent of population of a country follows Islam, otherwise 0.

3.3.3 Model

We use ordinary least square (OLS) regressions to investigate the effect of family firms on the cost of debt. In model 1 (Eq1), we exclude non pricing loan characteristics – namely loan size, maturity, loan purpose, secured, and covenant etc. – since they influence loan prices differently from other control variables (Aslan and Kumar, 2012). In Model 2 (Eq2), we include important non pricing loan characteristics variables.

Loan_spread = f(Family_firm, Borrower characteristics, country - level factors)   (Eq1)

Loan_spread = f(Family_firm, Borrower characteristics, Loan characteristics,

Country – level factors)   (Eq2)

In Eq. (1) and Eq. (2), the dependent variable is the natural logarithm of the loan spread. The main explanatory variable of interest is family firm. Borrower variables are observed in the year before loan signing (Francis et al., 2012). We control for country-level variables in all models. We include annual year dummies and industry fixed effects in all regressions. Robust standard errors are clustered at the firm level (Petersen, 2009).

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[19] Except for Taiwan which has a proportion of population following Buddhism and Taoism at 35.3% and Taoist 33.2%, respectively. Buddhism and Taoism share common value and beliefs with strong emphases on collectivism and familial interests (Lee et al. 1994). Chang (2012) find that Buddhism and Taoism religions have significant positive effects on strong family ties for all married individuals in Taiwan. Therefore, we consider people following Buddhism and Taoism in Taiwan as one group.

3.4 Results

3.4.1 Descriptive and univariate results

Table 3-1 presents the correlation matrix of the variables used in the models. Regarding the correlations between the explanatory variables, there is no high correlation among them since there is no correlation coefficient larger than 0.6. Therefore, it is unlikely that we have multicollinearity problems across these variables.

[Insert **Table 3-1** here]

Table 3-2 reports the number of firms which have bank loans versus firms which do not use bank loans for the full sample and for each country. Among 872 non-financial firms from ownership dataset of Carney and Child (2013), we report 28.9% of firms use bank financing, indicating that firms may face financial constraints to access to bank financing.

[Insert **Table 3-2** here]

Table 3-3 reports univariate results for firm characteristics between two groups (firms using bank financing vs. firms not using bank financing) for all firms, and by firm status (family vs. nonfamily firms). Compared to firms which do not use bank financing, firms which use bank financing are larger and have more tangible assets with a statistically significant difference at the 1% level (Panel A). Larger firms have less asymmetric information and more tangible assets which are usually pledged as collateral (Almeida and Campello, 2007, Murro and Peruzzi, 2019). Hence, creditors face less risk when dealing with these firms. In addition, firms with access to bank loans have lower growth opportunity. Interestingly, there is no difference in Altman Z-score between the two groups. Firms which use bank financing have a negligibly lower average ROA than firms which do not use bank financing (10.76% vs. 11.19%). The former group has a higher leverage ratio (29.99% vs. 20.77%). We report similar results for the univariate tests for firms with bank loans versus firms that do not borrow from banks among family firms and among nonfamily firms only in Panel B and C, respectively. Among family firms, firms with bank borrowings are larger and have more tangibility. They also have a higher level of debt. The results are similar among nonfamily firms. We report that among nonfamily firms, firms that use bank financing have even lower Altman Z-score.

[Insert **Table 3-4** here]

Table 3-4 reports univariate results for firm characteristics between firms with bank loans versus firms without bank loans for each country. Results show that banks consistently prefer firms which are large and have more tangible assets across countries in our sample. Firms with bank loans have higher leverage ratio across countries. In some countries, firms which do not use bank financing have even better Altman Z-score than firms which use bank financing.

[Insert **Table 3-4** here]

We now turn to analyze the sample of all firms using bank financing, which is our main interest.

Table 3-5 presents descriptive statistics and univariate results for firm characteristics at the time bank loans are conducted for all borrowers, and by family versus nonfamily business borrowers. Panel A reports that the borrowers are large and profitable (averages at $5.3 billion and 11%). The mean of the leverage ratio is 32%. The firms in the sample have substantial tangible assets (mean tangibility ratio of 46%). The mean of market-to-book assets ratio is 1.3. The average Altman Z-score is about 5.32, suggesting that borrowers have relatively low default risk. Family firms are significantly profitable, have more growth opportunities and have better Altman Z-score than nonfamily firms. For example, family firms have a higher EBITDA to total assets (13% vs. 10%), and higher market to book ratio (1.47 vs. 1.26). These differences between the two borrower groups are statistically significant at the 1% level. Panel B reports the differences in firm characteristics by family vs. nonfamily business borrowers in each country. The differences in firm characteristics between two groups vary from country to country.

[Insert **Table 3-5** here]

In our sample, more than 78% of loans are for nonfamily firms (**Figure 3-1**). **Figure 3-2** shows that family firms pay on average a spread of around 150 bps, while nonfamily firms pay around 100 bps. We remark that family firms pay higher spreads most of the time covered by the time span of the sample. Family firms pay higher loan spreads in most of the countries of the sample (except for Taiwan and South Korea).

[Insert **Figure 3-1** here]

[Insert **Figure 3-2** here]

Figure 3-3 shows non pricing loan terms by firm status. Compared to nonfamily firms, loans assigned for family firm are much less secured (14% vs. 37%) and have much less covenants attached (11% vs. 32%). The general corporate purpose is the most frequent loan purpose among family firms (37%), while debt refinancing is the most frequent purpose among nonfamily firms (44%). Furthermore, 41% of family firm loans are relationship loans while this percentage equals 62% for nonfamily firms.

[Insert **Figure 3-3** here]

Table 3-6 shows mean, standard deviation and t-test for loan price. For all firms, the average loan spread is about 117 points with a large standard deviation (Panel A). Compared to nonfamily firms, the univariate results indicate that family firms pay a larger cost (156 pts vs. 106 pts) with a statistically significant difference at the 1% level. Panel B reports descriptive statistics and univariate results for key loan characteristics. The average loan size is about 199 million USD. The average loan maturity is about 57 months with substantial variation. About 57% of loans are relationship based. We notice that loans for family firms are larger (although the difference is not statistically significant) with shorter maturity (although the difference is economically small). 41% of loans among family firms' loans are relationship based, while for nonfamily firms it is about 61%. We also remark that loans among family firms are less secured (15% vs. 37%) and have less covenants (10% vs. 31%). These differences are significant at the 1% level.

[Insert **Table 3-6** here]

3.4.2 Regression results

Our univariate tests in **Table 3-6** provide preliminary evidence that the cost of debt of family firms is significantly higher than for nonfamily firms. However, these univariate tests do not take into account potentially significant differences in loan and borrower characteristics between family firms and nonfamily firms. We use multivariate tests to better understand how family firm status affects the cost of debt.

Table 3-7 reports the main results. Column 1 reports that the coefficient of *Family_firm* is positive and statistically significant at 1% level, which indicates that family firms have a higher cost of debt than nonfamily firms. Comparing the results with Model 2, we find that controlling for other loan characteristics reduces only marginally the positive impact of family control on loan prices (Column 2).

We also find that the effects of firm size and Altman's *Z*-score on the loan price are negative and significant. These results are in line with previous studies (Lin et al., 2011, Chava et al., 2009, Hoffmann and Kleimeier, 2019). In addition, the effect of the tangibility on the loan spread is negative and significant at conventional levels, which is consistent with other studies (Lin et al., 2011, Francis et al., 2012). The market-to-book ratios are negatively related to loan prices and significantly after controlling for non-price loan characteristics, implying that creditors value high growth firms (Francis et al., 2012).

Turning to the effect of loan characteristics on the loan spread in Model 2 (Column 2), we find that loans with covenants have lower loan spreads, suggesting that covenants help to reduce the potential conflicts of interest between firms and creditors and protect creditors against potential expropriation risks (Cremers et al., 2007). Secured loans have a higher loan price at the conventional level, which is consistent with the theoretical prediction that banks will require

higher collateral when lending to relatively high-risk borrowers (Chava et al., 2009, Berger and Udell, 1990). We find that larger loan contracts have lower loan spreads, which is in line with Lin et al. (2011). The loan maturity has no effect on loan spreads. In addition, our results indicate that borrowers do not gain benefits from lending relationship.

We also report the impact of country-level factors on the cost of debt in **Table 3-7** in both models. The coefficients of *Creditor_right* are negative and significant at the level of 1%. The results indicate that stronger creditor rights protection helps to reduce the cost of debt since creditors face less risk of opportunistic behaviors from borrowers. We observe a divergent impact of religions on the cost of debt. While the coefficients for *Buddhism* are negative, the coefficients for *Islam* are positive. We can provide some explanations for these results following the hierarchical vs. non-hierarchical religious organization. For instance, Islam creates vertical bonds of obligations in society that do not encourage horizontal ties between people and may discourage trust (Putnam, 1993, Porta et al., 1996); while general trust is likely to be higher in non-hierarchical religions like Buddhism that promotes a sense of individualized responsibility (Bjørnskov, 2007). In turn, higher trust reduce loan spreads when a country's formal institutions are weak (Álvarez-Botas and González, 2021).

[Insert **Table 3-7** here]

3.4.3 Robustness checks

So far we have documented that family firms have a higher cost of debt compared to nonfamily firms. In this section we conduct a range of robustness checks of our results.

Alternative proxy for family firm variable

The prior empirical studies on family business have shown a variety of ways to define family firms (Prencipe et al., 2014, O'Boyle et al., 2012, Hernández-Linares et al., 2017). We acknowledge that results may be different corresponding to family firm classification. To examine whether our results are robust to the alternative proxy for a family firm, all firms in our sample are reclassified at the threshold of 10 percent ownership. A firm is classified as a family firm if the ultimate largest voting shareholder that holds equal or more than 10% of ownership is a family. Then, we rerun all model specifications in our analysis. We report the results of these regressions in **Table 3-8**. The results are strongly consistent. Our results so far firmly suggest that family firms have a higher cost of debt irrespective of the family firm classification.

[Insert **Table 3-8** here]

Endogeneity

There may be a potential endogeneity problem in our study. Our study is safe from simultaneity since loan spreads are likely to be determined by competitive forces in the market and by the creditors; hence, it is not very likely that the loan spreads would affect corporate ownership and control (Lin et al., 2011). However, our results may be biased due to the presence of omitted variables that affect both loan spreads and family firm status. To further address the endogeneity issue, we apply a two-stage instrumental variable estimation. We follow Wooldridge (2010) for models that have binary endogenous explanatory variable. In the first step, we estimate a binary response model by maximum likelihood; in the second step, we use the obtained fitted probability as an instrument. Wooldridge (2010) shows that this approach generates consistent coefficients, as well as correct standard errors.

We use the trust level in family as an instrumental variable for family firm. A good instrumental variable is expected to be correlated with family firm status, but unlikely to have direct impact on loan spread. Banfield (1967) finds that there is a potential trade-off between the trust among kinship networks and trust in society at large. He finds that "amoral familism" is one of the main reasons that affect the structure of a firm. Similarly, Fukuyama (1995) find that in a society where people are taught to trust only their family networks, they are also taught to distrust people outside the family. Sundaramurthy (2008) shows that the existence of family firms are not purely based on economic optimization, but instead the outcome of trust. Therefore, we expect an association between the trust level in family and family firm status. Furthermore, Álvarez-Botas and González (2021) find that trust in general has no direct impact on the cost of bank loans. Therefore, we expect that trust level in family is less likely to have direct impact on loan spreads.

First, we run a probit model that includes the trust level in family and all explanatory variables used in our main model to obtain fitted probability for family firm. Second, we run IV estimation with instrumental variable which is fitted probability. Follow Alesina and Giuliano (2010), we measure the trust in family based on the following question in the World Value Survey: *"Could you tell me how much you trust your family?"*, where the answer could take the following values: "Trust them completely" (5), "Trust them a little" (4), "Neither trust or distrust them" (3), "Do not trust them very much" (2), and "Do not trust them at all" (1).

Table 3-9 reports results of probit model estimation, the first-stage and second-stage of IV 2SLS regressions in columns 1, 2 and 3, respectively. Column 1 shows that the coefficient of *Trustinfamily* is negative and significant at the 1% level. Family firms in our sample are large

publicly traded, while the high level of trust in family is considered as a competitive advantage for family businesses in the early stages (Sundaramurthy, 2008). Our results are supported by Steier (2001) who claims that *"what was once a very resilient trust is replaced by an atmosphere of fragile trust,"* and unfortunately, this saga is a recurring theme in many family businesses.

Column 2 presents the results of first-stage regression of IV 2SLS estimation. We conduct two tests that provide support for our choice of instrument and report the results in the bottom of Column 2 in **Table 3-9**. We use the Durbin-Wu-Hausman (DWH) chi-squared test to test whether family firm is endogenous. The null hypothesis is that family firm is exogenous with respect to loan spreads and the rejection of this hypothesis implies that family firm is indeed endogenous and validates the IV approach. To test whether our instrument is relevant, we calculate the Cragg-Donald statistic, which is 26.06 and is higher than the 11.04 critical value reported by Stock and Yogo (2005). This implies that our instrument for family firm is not weak.

Column 2 of **Table 3-9** shows the regression results from the second stage. The coefficient of *Family_firm* is positive and statistically significant at the 1% level, suggesting that family firms suffer a higher cost of debt than nonfamily firms, reinforcing our earlier findings.

[Insert **Table 3-9** here]

Additional control variables

In our sample, family firms bear a higher cost of debt than nonfamily firms in most countries, except for Taiwan and Korea. To test whether a higher cost of debt family firms pay is due to firm status (family vs. nonfamily firm) or primary derived from weak creditor rights protection, we include an interaction term of *Family_firm* and *Creditor_right* in the model. If the

higher cost of debt is primary due to weak creditor rights' protection, we expect an insignificant coefficient of *Family_firm* and a negative and significant coefficient of the interaction term. Column 1 of **Table 3-10** shows that the coefficient of *Family_firm* is positive and significant at 1% level. The coefficient of *Family_firm* is even larger than without including the interaction term. The results indicate that family firms pay a higher cost of debt than nonfamily firms due to firm status. The coefficient of interaction term is negative and significant at 1% level, suggesting that the impact of family firms on the cost of debt is stronger in the weaker institutional environments.

Our results in **Table 3-7** (Column 2) show that loans with covenants have lower loan spreads. This implies there may be a trade-off between covenants and loan spreads. In our sample, only 10% of loans to family firms have covenants contrasting with 31% of loans to firms. One concern is whether the higher debt financing costs of family firms substitutes for covenants requirement. To investigate the net effect of family firms on the cost of debt, we include the interaction term between family firm and a dummy equal to one if there is no covenants requirement. If not having covenants requirement is the driving force of the higher cost of debt family firms suffer, the coefficient of *Family_firm* would be insignificant and the coefficient of the interaction term would be significantly positive, implying that family firms pay a higher loan spread due the absence of covenants, not due to family firm status. Column 2 of **Table 3-10** shows that the coefficient of the interaction term is negative and significant at 1%, indicating that loans signed by family firms without covenants even have a lower loan spread than with covenants. The coefficient of *Family_firm* after including interaction term is larger. The results show that the presence of covenants is not a trade-off of a higher cost for the

flexibility that family firms may intentionally choose. Hence, our results indicate that family firms face a higher cost of debt than nonfamily firms are robust.

Our results in **Table 3-7** (Column 2) also indicate that secured loans have higher loan spreads. In our sample, family firms have less secured loans[20] than nonfamily firm (15% versus 37%). To investigate whether the positive relationship between family firms and the cost of debt may be driven by the presence of collateral, we include an interaction term between *Family_firm* and *Secured* variables. If collateral is the driving force of the higher cost of debt for family firms, the interaction term would be significantly positive. However, Column 3 of **Table 3-10** shows that the interaction term is insignificant, indicating that the impact of family ownership on loan spread is not moderated by collateral. The impact of family ownership status on the cost of debt is confirmed.

Finally, since our timespan covers the financial crisis period, one can wonder if the effect of family firms on the cost of debt might be overstated. Bernanke et al. (1996) find that adverse shocks in financial markets may amplify the intrinsic cost of agency conflicts in the relationship between borrowers and creditors, affecting some types of borrowers disproportionately. Prior literature shows that family firms would move out of equilibrium in a way that magnifies either the benefits or the costs of family control in the financial crisis (D'Aurizio et al., 2015, Lins et al., 2013). Based on previous studies, we determine financial crisis period that is from 2008 to 2009 (Lins et al., 2013, Aldamen et al., 2020). To achieve the reliability of analysis, we add an

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[20] In investigating the impact of family firm status on the loan spread, we focus on the dynamic loan characteristics that creditors and borrowers can bargain, such as covenants and secured, rather than loan purpose since loan purpose is the primal factor on which borrowers stick and that creditors are unable to ask for change. We still, however, check whether the positive relationship between family firms and the cost of debt may be driven by the loan purpose since in our sample, family firms borrow most for the general corporate purpose (37%), while nonfamily firms borrow most for debt refinancing purpose (44%). We include an interaction term between family firm and corporate purpose dummy variables in the model. Our results show that the loan general corporate purpose has no impact on the relationship between family firms and loan spread.

interaction term between family firm dummy and crisis dummy. Column 4 of **Table 3-10** reports that the coefficient of the interaction term is insignificant, suggesting that including external financial shocks does not overstate the effect of family firm on the cost of debt.

[Insert **Table 3-10** here]

3.5   Conclusion

Given the limited number of studies on family business in East Asia, we investigate the impact of family firms on the cost of debt in East Asia during the period from 2000 to 2017. Acknowledging that family firms are influenced by environment, we consider the impact of family firms on the cost of debt financing in the context of formal and informal institutions. We find consistent evidence that family firms pay a significant higher cost of debt (loan spreads). Family firms pay even higher cost of debt in weak institutional environments. We document that stronger creditor protection legal helps reduce the cost of debt, while religions have divergent impact on the cost of debt. We further find that loan spreads are higher for firms with small size and high leverage. On the other hand, we report that loan spreads are lower for firms with more tangible assets and low default risk. Furthermore, covenants help reduce the cost of debt while collateral is embedded in relatively riskier borrowers. Overall, our results highlight the impact of family firms on the cost of debt. Our results survive several robustness checks related to endogeneity and heteroskedasticity issues, and family firm classification.

We believe that our study enriches family business literature by adding "Asian" family firms to Western slant in the current literature on family enterprises, contributing to the knowledge about family firms around the world.

This study has some limitations that need to be acknowledged. East Asia is an ideal context for our study; however, the number of firms which can be chased the ultimate ownership use bank financing is not large, implicating that firms may turn to the alternative sources of financing. There remains a need to collect more data to study the impact of family firms on the alternative debt financing which would contribute to the generalizability of our findings. Moreover, family businesses are not a homogenous group, and therefore, future research should identify different types of family businesses. Finally, empirical examination of the relationship between the cost of equity and family ownership in East Asia offers an exciting avenue for further research.

Appendix B: Definition of variables and sources

Variables	Definition	Source
Dependent variable		
Loan_spread	Natural logarithm of the loan spread. Loan spread is the all-in-drawn spread, defined as the amount the borrower pays in basis points over LIBOR or LIBOR equivalent for the drawn portion of the loan facility	Dealscan
Borrower characteristics		
Family_firm	Equals to 1 if the largest shareholder who holds at least 20% of ownership is a family or individual, 0 otherwise.	Carney (2013)
Firm_size	Natural logarithm of total assets in thousands of $US.	DataStream
Leverage	Ratio of total debt (long-term plus short-term debt) to market value of a firm. Market value of a firm is defined by market value of equity plus book value of total debt.	DataStream
Profitability	Ratio of earnings before interest, tax, depreciation, and amortization (EBITDA) over total assets.	DataStream
Tangibility	Ratio of net property, plant, and equipment (PPE) over to total assets.	DataStream
Q	*Q* is defined by total assets minus book value of equity plus market value of equity divided by total assets.	DataStream
Altman_Zscore	We apply the Z-score model developed by Altman (2005) for the emerging market as follows: *Altman_Zscore* $=6.56 \ast X1 + 3.26 \ast X2 + 6.72 \ast X3 + 1.05 \ast X4 + 3.25$ Where: $X1$ = Working Capital/Total Assets; $X2$ = Retained Earnings/Total Assets; $X3$ = Earnings before Interest and Taxes/Total Assets; $X4$ = book value of equity/total liabilities.	Author's calculation
Loan characteristics		
Loan_size	Natural logarithm of a loan facility amount, measured in millions of US dollars.	Dealscan
Loan_maturity	Natural logarithm of the numbers of months from the intercept day to expired day of a loan facility.	Dealscan
Loan_purp.	Dummy variables for loan purposes, including corporate purpose/working capital purpose, refinancing purpose, acquisition purpose, capital expenditure purpose, backup line purpose, and others.	Dealscan
Secured	Equals to 1 if a loan is secured, 0 otherwise.	Dealscan
Covenant	Equals to 1 if a loan contract contains financial covenants, 0 otherwise.	Dealscan
Prior_rel	Equals to 1 if a firm has the past loan signed with the same creditor within 5 years, and 0 otherwise.	
Country level variable		
Creditor_right	An index aggregating creditor rights, following La Porta et al. (1998). A score of one is assigned when each of the following rights of secured lenders is defined in laws and regulations: First, there are restrictions, such as creditor consent or minimum dividends, for a debtor to file for reorganization. Second, secured creditors are able to seize their collateral after the reorganization petition is approved, i.e. there is no "automatic stay" or "asset freeze." Third, secured creditors are paid first out of the proceeds of liquidating a bankrupt firm, as opposed to other creditors such as government or workers. Finally, if	Djankov et al. (2007)

	management does not retain administration of its property pending the resolution of the reorganization. The index ranges from 0 (weak creditor rights) to 4 (strong creditor rights).[21]	
GDPpercapita	Gross domestic product per capita.	World bank
Buddhism	A dummy variable equal to 1 if more than 50 percent of population of a country follows Buddhism, otherwise 0.[22]	Central Intelligence Agency
Catholic	A dummy variable equal to 1 if more than 50 percent of population of a country follows Catholicism, otherwise 0.	Central Intelligence Agency
Islam	A dummy variable equal to 1 if more than 50 percent of population of a country follows Islam, otherwise 0.	Central Intelligence Agency
Trustinfamily	Trust level in family is the average score of all individual respondents in each country for the question: "Could you tell me how much you trust your family?" 1. "Trust them completely" – 5 scores; 2. "Trust them a little" – 4 scores; 3. "Neither trust or distrust them" – 3 scores; 4. "Do not trust them very much" – 2 scores; 5. "Do not trust them at all" – 1 score.	WVS

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[21] The La Porta et al. (1996) measure of creditor rights is available for a single cross section of countries (year 1995). The Djankov et al. (2007) and the La Porta et al. (1996) measures are highly correlated. However, Djankov et al. (2007) improves on the La Porta et al. (1996) measure by providing a time series of this variable.

[22] Except for Taiwan which has proportion of population follow Buddhism and Taoism are 35.3% and Taoist 33.2%, respectively. Buddhism and Taoism share common value and beliefs with strong emphases on collectivism and familial interests (Lee et al. 1994). Chang (2012) find that Buddhism and Taoism religions have significantly positive related. Therefore, we consider people follow Buddhism and Taoism in Taiwan as one group.

Correlation matrix

	Loan_spread	Loan_size	Loan_maturity	Secured	Covernant	Prior_rel	Firm_size	Leverage	Profitability	Q	Tangibility
Loan_spread	1										
Loan_size	-0.086**	1									
Loan_maturity	-0.087**	0.015	1								
Secured	-0.001	0.05	0.171***	1							
Covernant	-0.090**	0.017	0.029	0.115***	1						
Prior_rel	-0.116***	0.019	0.045	0.116***	0.226***	1					
Firm_size	-0.083**	0.450***	-0.076**	-0.108***	-0.052	0.081**	1				
Leverage	0.083**	-0.125***	0.097***	0.027	-0.099***	0.161***	0.112***	1			
Profitability	0.004	0.119***	-0.024	-0.086**	-0.023	-0.066*	-0.084**	-0.368***	1		
Q	0.006	0.059*	-0.061*	-0.084**	-0.025	-0.126***	-0.173***	-0.503***	0.464***	1	
Tangibility	-0.087**	0.046	0.188***	0.052	-0.165***	0.022	0.151***	0.375***	0.085**	-0.109***	1
Altman_Zscore	-0.032	-0.023	0.027	-0.092**	0.065*	-0.081**	-0.254***	-0.533***	0.502***	0.396***	-0.359***
Creditor_right	-0.01	0.107***	-0.092***	-0.208***	-0.242***	-0.239***	0.237***	0.017	-0.035	-0.081**	0.039
GDPpercapita	-0.163***	0.103***	-0.072*	-0.025	0.114***	0.075**	0.187***	-0.027	-0.193***	-0.185***	-0.184***
Buddhism	-0.352***	-0.075**	0.075**	0.300***	0.359***	0.310***	-0.231***	-0.054	-0.176***	-0.065*	-0.168***
Catholic	0.209***	-0.001	0.006	-0.109***	-0.074**	-0.016	0.009	0.031	0.068*	0.018	0.055*
Islam	0.287***	0.018	-0.031	-0.055*	-0.111***	-0.191***	-0.164***	-0.096***	0.255***	0.308***	0.060*

Table 3-1: Correlation matrix

	Altman_Zscore	Creditor_right	GDPpercapita	Buddhism	Catholic	Islam
Altman_Zscore	1					
Creditor_right	-0.04	1				
GDPpercapita	-0.025	0.584***	1			
Buddhism	0.002	-0.473***	0.209***	1		
Catholic	0.027	-0.472***	-0.451***	-0.315***	1	
Islam	0.164***	-0.02	-0.480***	-0.371***	-0.067*	1

Table 3-1 (Cont.)
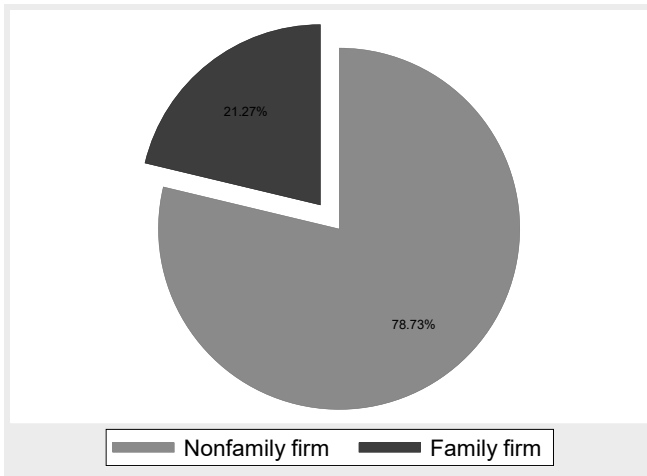
Figure 3-1: Number of loans by firm status
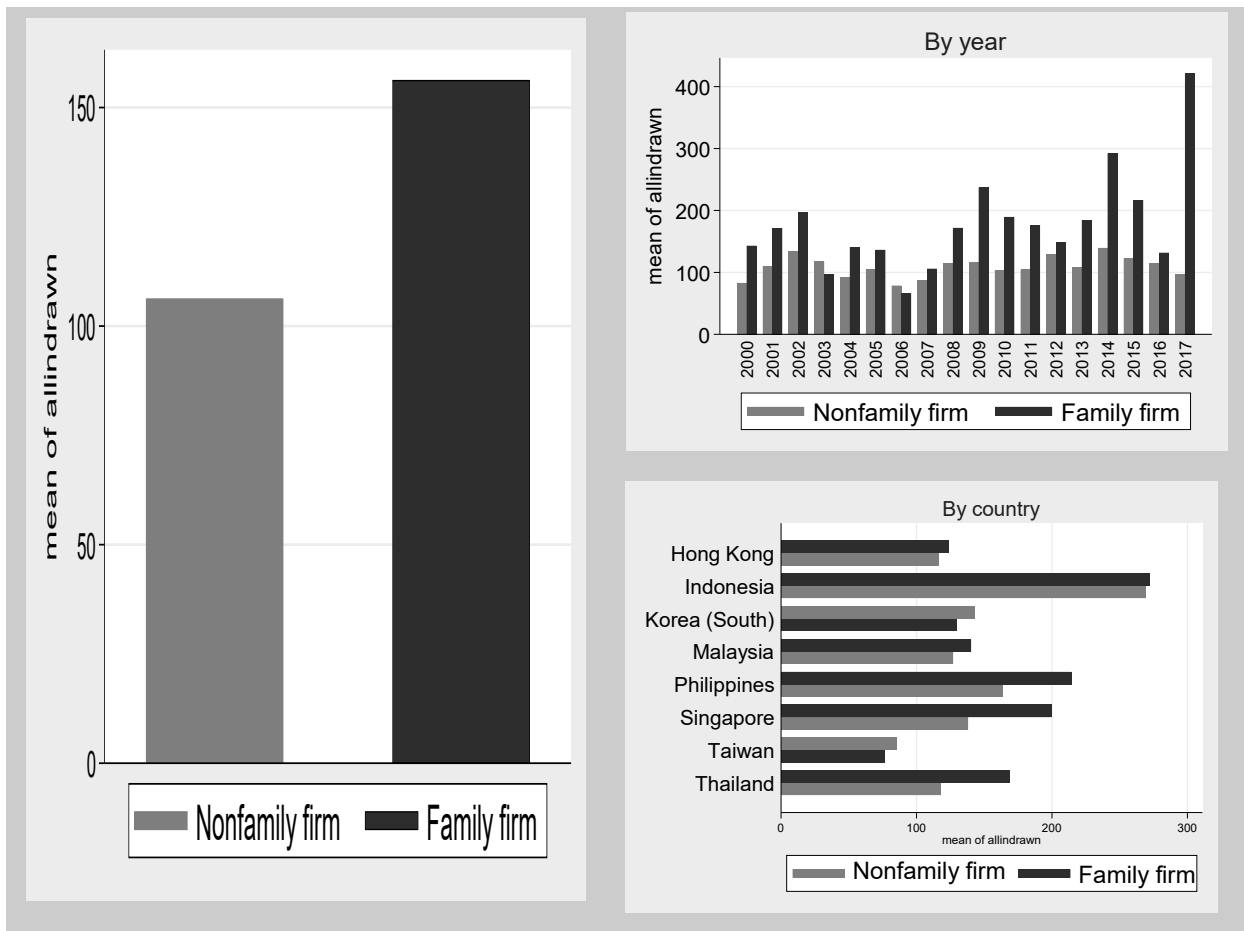
Figure 3-2: Loan spread of family firm vs. Nonfamily firm
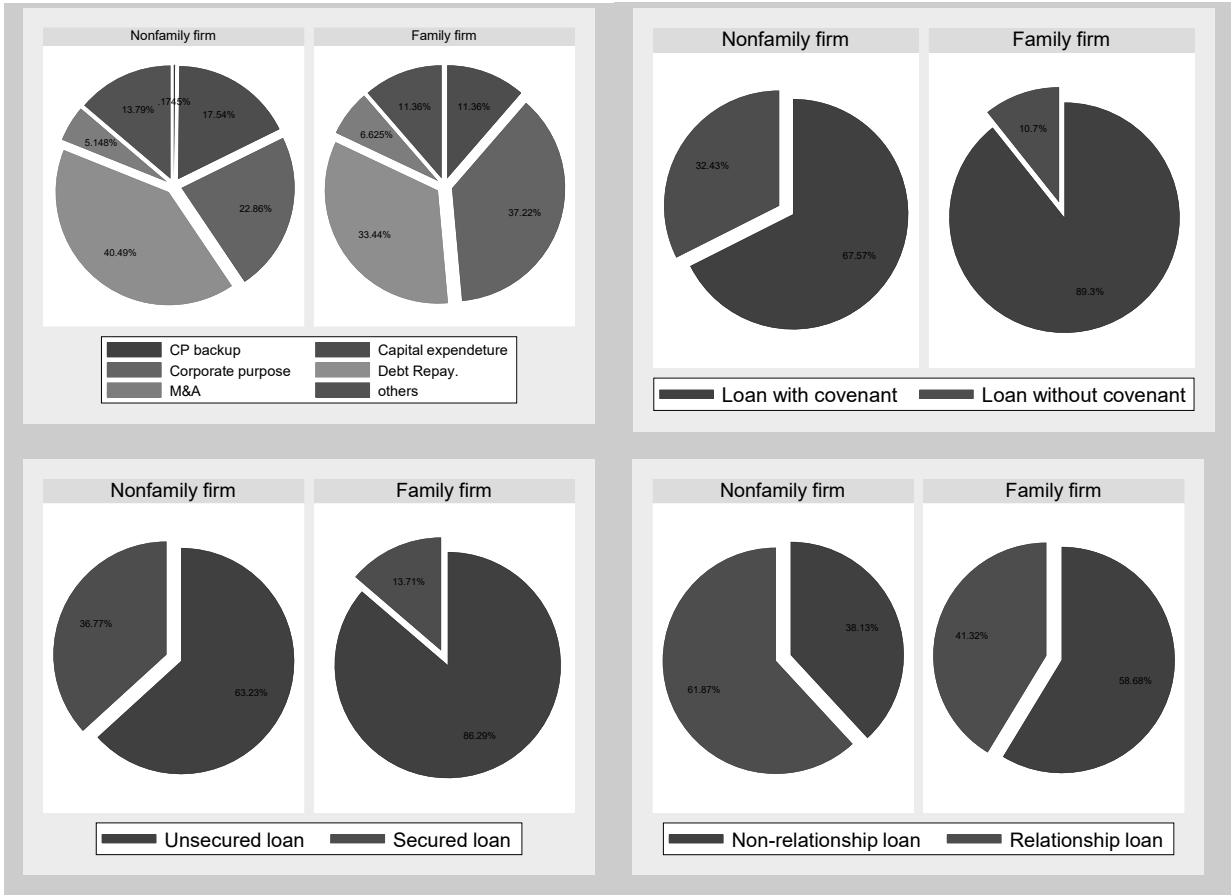
Figure 3-3: Loan charactersitics by firm status

Table 3-2: Firms which use bank financing by country

	Total firms	Firms use bank financing	Firms do not use bank financing
	919 (100%)	266 (28.9%)	653 (72.1%)
HKG	106	23	83
IDN	100	26	74
KOR	146	55	91
MYS	125	29	96
PHL	73	16	57
SGP	106	25	81
THA	118	27	91
TWN	145	65	80

Table 3-3: Univariate results of firm characteristics between firms which use bank financing vs. firms which do not use bank financing for all firms, and by firm status (family firms vs. nonfamily firms)

	Firms use bank financing	Firms do not use bank financing	T-test
Panel A: All firms			
Firm_size	14.51	12.79	(74.89)***
Leverage	29.98	20.75	(37.88)***
Profitability	10.75	11.22	(3.88)***
Q	1.36	1.51	(11.66)***
Tangibility	42.07	36.02	(19.48)***
Altman_Zscore	5.39	6.19	-1.8
Panel B: Family firms			
Firm_size	14.5	12.59	(45.58)***
Leverage	32.06	22.93	(19.41)***
Profitability	10.99	10.26	(3.33)***
Q	1.39	1.4	-0.46
Tangibility	44.49	38.22	(10.76)***
Altman_Zscore	4.93	4.9	(0.03)
Panel C: Nonfamily firms			
Firm_size	14.51	12.96	(50.80)***
Leverage	29.01	18.87	(32.94)***
Profitability	10.54	12.19	(10.44)***
Q	1.34	1.6	(16.57)***
Tangibility	41.15	34.32	(16.92)***
Altman_Zscore	5.56	7.07	(3.45)***

This table reports univariate results of firm characteristic between two groups: firms use bank financing vs. firms that do use bank financing by country

	Firms use bank financing	Firms do not use bank financing	T-test	Firms use bank financing	Firms do not use bank financing	T-test	Firms use bank financing	Firms do not use bank financing	T-test	Firms use bank financing	Firms do not use bank financing	T-test
	HKG			**PHL**			**KOR**			**THA**		
Firm_size	15.05	13.06	(22.14)***	14.23	11.64	(24.51)***	15.63	13.87	(35.68)***	13.99	12.41	(17.09)***
Leverage	27.65	20.3	(9.39)***	36.06	21.96	(11.97)***	36.85	22.18	(25.37)***	28.55	23.66	(4.52)***
Profitability	9.37	6.07	(8.90)***	12.52	9.24	(6.24)***	9.87	11.18	(5.52)***	15.29	13.27	(3.93)***
Q	1.39	1.16	(7.59)***	1.58	1.46	(1.80)	1.08	1.51	(15.34)***	1.7	1.56	(3.07)**
Tangibility	37.41	28.99	(8.42)***	43.94	38.5	(3.69)***	44.63	35.07	(16.04)***	44.5	40.53	(3.10)**
Altman_Zscore	6.32	9.99	(4.11)***	3.77	-0.9	(0.40)	4.48	6.51	(14.59)***	6.08	8.75	-1.88
	IDN			**SGP**			**MYS**			**TWN**		
Firm_size	13.75	12.35	(23.40)***	13.93	12.44	(21.98)***	14.1	12.98	(16.57)***	14.26	13.32	(21.93)***
Leverage	30.24	24.19	(6.40)***	23.12	19.31	(5.64)***	31.27	19.59	(14.05)***	27.55	11.36	(31.19)***
Profitability	14.12	13.77	(0.73)	10.65	9.1	(3.89)***	9.47	12.26	(6.24)***	10.07	15.02	(22.41)***
Q	1.75	1.64	(2.51)*	1.58	1.45	(3.04)**	1.27	1.48	(3.91)***	1.3	1.96	(27.69)***
Tangibility	48.1	40.2	(7.83)***	39.02	33.44	(5.02)***	47.8	39.6	(6.38)***	39.55	27.22	(16.97)***
Altman_Zscore	4.55	-0.39	(0.60)	5.73	1.69	(0.64)	6.11	9.01	(6.15)***	5.96	9.07	(25.94)***

Panel A: Full sample

	Full sample				Family firms		firms		
	Mean	*SD*	*Max*	*Min*	*Mean*	*SD*	*Mean*	*SD*	*T-test*
Firm_size	14.77	1.26	18.47	7.66	14.89	1.44	14.73	1.21	(1.88)
Leverage	32.41	17.74	83.23	0	31.77	17.71	32.58	17.75	-0.68
Profitability	11.06	8.37	68.14	-38.62	13.22	7.87	10.5	8.4	(4.88)***
Q	1.3	0.78	11.98	0.43	1.47	0.95	1.26	0.73	(4.02)***
Tangibility	0.46	0.22	0.98	0.01	0.47	0.19	0.45	0.22	(1.22)
Altman_Zscore	5.32	2.21	17.41	-8.14	5.69	2.41	5.22	2.15	(3.18)**
Total_assets	5.34E+09	8.39E+09	1.05E+10	2.12E+06	7.56E+09	1.37E+09	4.76E+09	6.18E+09	(5.09)***

Table 3-5: Descriptive and univariate results for firm characteristics by family firms vs. nonfamily firms for full sample and for each country

Panel B: By country

	Family firm	Nonfamily firm	T-test	Family firm	Nonfamily firm	T-test	Family firm	Nonfamily firm	T-test	Family firm	Nonfamily firm	T-test
	HKG			**KOR**			**PHL**			**THA**		
Firm_size	15.11	15	(0.78)	15.98	15.4	(8.67)***	13.95	15.21	(5.34)***	13.45	14.26	(8.68)***
Leverage	23.83	30.13	(4.87)***	34.88	38.09	(3.89)***	36.32	34.38	(1.08)	26.99	30.19	(2.19)*
Profitability	11.32	8.12	(7.58)***	11.13	9.02	(7.06)***	11.68	16.36	(4.05)***	14.13	15.12	-1.34
Q	1.49	1.33	(2.62)**	1.09	1.06	(2.08)*	1.62	1.39	(2.19)*	1.79	1.58	(2.55)*
Tangibility	35.57	38.62	-1.77	40.85	47.7	(6.59)***	41.87	53.48	(4.51)***	54.39	39.11	(5.40)***
Altman_Zscore	8.35	5.05	(11.62)***	4.59	4.41	(2.43)*	3.14	5.23	(2.51)*	5.84	6.07	-1.17
	IDN			**MYS**			**SGP**			**TWN**		
Firm_size	13.53	13.9	(5.87)***	14.08	14.18	-0.68	12.82	14.48	(13.00)***	14.32	14.26	(0.56)
Leverage	33.74	26.3	(6.15)***	30.76	30.97	-0.15	30.14	19.46	(8.84)***	31.07	27.37	(2.50)*
Profitability	10.76	17.35	(9.60)***	10.8	8.74	(4.84)***	9.82	10.7	-1.11	7.98	10.17	(4.10)***
Q	1.61	1.83	(3.30)**	1.37	1.21	(4.17)***	1.29	1.7	(6.40)***	1.35	1.3	(1.36)
Tangibility	50.52	44.91	(3.10)**	47.24	48.69	-0.6	49.37	34.17	(7.45)***	45.32	39.24	(3.13)**
Altman_Zscore	2.51	6.1	(5.89)***	7.06	5.38	(7.32)***	6.25	5.28	(5.09)***	5.37	5.99	(3.44)***

Table 3-5 (Cont.)

Table 3-6: Descriptive statistics for loan characteristics by firm status

	Full sample				Family firms		Nonfamily firms		
	Mean	*SD*	*Max*	*Min*	*Mean*	*SD*	*Mean*	*SD*	*T-test*
Panel A: Loan price									
All_in_drawn	117.20	88.30	700.00	2.00	156.99	114.83	106.20	75.88	(9.33)***
Loan_spread	4.54	0.66	6.55	0.69	4.79	0.77	4.47	0.60	(7.63)***
Panel B: Loan characteristics									
Facility amount	1.99e+08	3.86e+08	6.00e+09	0.00	1.74e+08	4.01e+08	2.06e+08	3.82e+08	-1.31
Maturity (months)	57.60	29.44	240.00	1.00	54.31	30.77	58.50	29.01	(2.23)*
Loan_size	18.43	1.14	22.52	13.30	18.34	1.08	18.45	1.16	-1.51
Loan_maturity	3.92	0.55	5.48	0.00	3.84	0.60	3.95	0.54	(3.17)**
Secured	0.32	0.47	1.00	0.00	0.15	0.35	0.37	0.48	(7.66)***
Covernant	0.27	0.44	1.00	0.00	0.10	0.30	0.31	0.46	(7.71)***
Prior_rel	0.57	0.49	1.00	0.00	0.41	0.49	0.62	0.49	(6.64)***

Table 3-7: Loan spreads and family ownership at threshold 20% – OLS method

This table reports results of ordinary least square (OLS) regressions. The dependent variable is natural logarithm of all-in-drawn spread. A family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. Variables are described in Appendix B. Dummy variables for loan purpose, industry fixed effect and year fixed effect are included in the models but not reported. Numbers in the parentheses are standard errors clustered at the firm level. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Model 1	Model 2
	(1)	(2)
Family_firm	0.125***	0.109**
	(0.042)	(0.042)
Firm_size	-0.117***	-0.093***
	(0.014)	(0.016)
Leverage	0.004***	0.003***
	(0.001)	(0.001)
Profitability	0.004	0.006**
	(0.003)	(0.003)
Q	(0.036)	-0.050**
	(0.024)	(0.023)
Tangibility	-0.279***	-0.260**
	(0.102)	(0.105)
Altman_Zscore	-0.019*	-0.020**
	(0.010)	(0.010)
Loan_size		-0.045***
		(0.016)
Loan_maturity		0.024
		(0.030)
Covenant		-0.224***
		(0.038)
Secured		0.090***
		(0.033)
Prior_rel		-0.050
		(0.036)
Creditor_right	-0.537***	-0.514***
	(0.107)	(0.109)
GDPpercapita	0.000***	0.000***
	(0.000)	(0.000)
Buddhism	-1.034***	-0.976***
	(0.120)	(0.124)
Catholic	-0.279	-0.220
	(0.212)	(0.221)
Islam	0.399***	0.358***
	(0.117)	(0.120)

Intercept	7.863***	9.017***
	(0.350)	(0.508)
Loan purpose control	No	Yes
Industry fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Obs.	1278	1252
Adj.R2	0.430	0.460

Table 3-8: Loan spreads and family ownership at threshold 10% – OLS method

This table reports results of ordinary least square (OLS) regressions. The dependent variable is natural logarithm of all in drawn spread. A family firm is defined as a firm in which the largest shareholder who holds at least 10% of ownership is a family or individual. Variables are described in Appendix B. Dummy variables for loan purpose, industry fixed effect and year fixed effect are included in the models but not reported. Numbers in the parentheses are robust t-statistics based on standard errors adjusted for heteroskedasticity. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Model 1 (1)	Model 2 (2)
Family_firm	0.131***	0.123***
	(0.037)	(0.037)
Firm_size	-0.145***	-0.126***
	(0.015)	(0.018)
Leverage	0.002**	0.002*
	(0.001)	(0.001)
Profitability	0.004	0.005*
	(0.003)	(0.003)
Q	-0.052**	-0.071***
	(0.024)	(0.024)
Tangibility	-0.119	-0.067
	(0.104)	(0.108)
Altman_Zscore	-0.012	-0.010
	(0.009)	(0.010)
Loan_size		-0.030*
		(0.017)
Loan_maturity		0.029
		(0.032)
Covenant		-0.231***
		(0.038)
Secured		0.084**
		(0.033)
Prior_rel		-0.062
		(0.039)
Creditor_right	-0.524***	-0.479***
	(0.112)	(0.112)
GDPpercapita	0.000***	0.000**
	(0.000)	(0.000)
Buddhism	-1.069***	-0.977***
	(0.117)	(0.116)
Catholic	-0.553***	-0.454**
	(0.185)	(0.189)
Islam	(0.156)	-0.316**
	(0.147)	(0.146)

Intercept	8.044***	8.644***
	(0.380)	(0.406)
Loan purpose control	No	Yes
Industry fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Obs.	1220	1196
Adj.R2	0.420	0.450

Table 3-9: Loan spreads and family ownership – IV method

This table reports results of probit model in Column 1, and instrumental variable two-stage least square (IV 2SLS) in columns 2 and 3. We investigate the impact of family firms on the cost of debt for a sample of over 1,200 syndicated loans from eight East Asian countries during the period from 2000 to 2017. The cut-off level of ownership is 20%. A family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The dependent variable is natural logarithm of all in drawn spread. *Fitted_Pro_FF* is the fitted probability of a family firm from probit model. Dummy variables for loan purpose, industry fixed effect and year fixed effect are included in the models but not reported. Numbers in the parentheses are robust t-statistics based on standard errors adjusted for heteroskedasticity. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Probit Model	**First – stage IV**	**Second – stage IV**
	Dependent variable: *Family_firm*	Dependent variable: *Family_firm*	Dependent variable: *Loan_spread*
	(1)	(2)	(3)
Family_firm			0.103***
			(0.017)
Trustinfamily	-17.808***		
	(6.189)		
Fitted_Pro_FF		0.910***	
		0.178	
Firm_size	0.080*	0.002	0.003**
	(0.048)	(0.012)	(0.001)
Leverage	0.001	0.000	0.006**
	(0.004)	(0.001)	(0.003)
Profitability	(0.008)	-0.000	-0.063**
	(0.008)	(0.002)	(0.027)
Q	0.044	0.002	(0.161)
	(0.070)	(0.018)	(0.119)
Tangibility	-0.533*	-0.015	-0.025**
	(0.283)	(0.65)	(0.010)
Altman_Zscore	0.054	0.002	-0.038**
	(0.033)	(0.005)	(0.017)
Loan_size	(0.035)	.001	0.025
	(0.049)	(0.010)	(0.033)
Loan_maturity	0.000	-0.000	-0.174***
	(0.082)	(0.021)	(0.043)
Secured	-0.492***	-0.001	0.137***
	(0.122)	(0.022)	(0.038)
Covenant	-0.447***	-0.009	0.044
	(0.148)	(0.030)	(0.040)
Prior_rel	(0.005)	0.0001	-0.516***
	(0.107)	(0.026)	(0.112)
Creditor_right	0.059	-0.019	0.000***

	(0.248)	(0.074)	0.000
GDPpercapita	-0.000***	0.000	-0.877***
	0.000	0.000	(0.140)
Buddhism	-0.546*	-0.036	-0.294
	(0.281)	(0.086)	-0.237
Catholic	0.435	-0.032	0.216
	(0.477)	(0.150)	(0.135)
Islam	(0.067)	0.009	7.837***
	(0.380)	(0.092)	(0.437)
Intercept	14.197***	0.021	-0.103***
	(5.444)	0.284	(0.017)
Loan purpose control	Yes	Yes	Yes
Industry fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Obs.	1250	1250	1250
Adj.R2		0.240	0.340
Durbin-Wu-Hausman (DWH)(p_value)		0.014	
Cragg-Donald		26.06	

Table 3-10: Loan spreads and family ownership – additional control variables

This table reports results of ordinary least square (OLS) regressions. The dependent variable is natural logarithm of all in drawn spread. A family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. Variables are described in Appendix B. Dummy variables for loan purpose, industry fixed effect and year fixed effect are included in the models but not reported. Numbers in the parentheses are robust t-statistics based on standard errors adjusted for heteroskedasticity. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	(1)	(2)	(3)	(4)
Family_Own	0.478***	0.387***	0.100**	0.101**
	(0.137)	(0.094)	(0.046)	(0.046)
FF_Creditorright	-0.149***			
	(0.055)			
FF_nocovenant		-0.321***		
		(0.101)		
FF_secured			0.059	
			(0.109)	
FF_crisis				0.046
				(0.120)
Firm_size	-0.093***	-0.094***	-0.093***	-0.093***
	(0.016)	(0.016)	(0.016)	(0.016)
Leverage	0.003***	0.003***	0.003***	0.003***
	(0.001)	(0.001)	(0.001)	(0.001)
Profitability	0.006**	0.006**	0.006**	0.006**
	(0.003)	(0.003)	(0.003)	(0.003)
Q	-0.053**	-0.055**	-0.050**	-0.050**
	(0.023)	(0.023)	(0.023)	(0.023)
Tangibility	-0.248**	-0.286***	-0.256**	-0.260**
	(0.105)	(0.105)	(0.106)	(0.105)
Altman_Zscore	-0.020*	-0.021**	-0.020**	-0.020**
	(0.010)	(0.010)	(0.010)	(0.010)
Loan_size	-0.041**	-0.044***	-0.045***	-0.045***
	(0.016)	(0.016)	(0.016)	(0.016)
Loan_maturity	0.026	0.023	0.025	0.024
	(0.030)	(0.030)	(0.030)	(0.030)
Covenant	-0.223***		-0.223***	-0.223***
	(0.037)		(0.038)	(0.038)
Nocovenant		0.266***		
		(0.039)		
Secured	0.097***	0.095***	0.084**	0.089***
	(0.033)	(0.033)	(0.034)	(0.033)
Prior_rel	(0.046)	(0.049)	(0.049)	(0.050)
	(0.036)	(0.036)	(0.036)	(0.036)
Creditor_right	-0.474***	-0.507***	-0.517***	-0.513***

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	(0.112)	(0.108)	(0.110)	(0.110)
GDPpercapita	0.000***	0.000***	0.000***	0.000***
	0.000	0.000	0.000	0.000
Buddhism	-0.980***	-0.966***	-0.981***	-0.974***
	(0.124)	(0.123)	(0.125)	(0.124)
Catholic	(0.293)	(0.238)	(0.224)	(0.215)
	(0.219)	(0.218)	(0.221)	(0.221)
Islam	0.322***	0.357***	0.353***	0.360***
	(0.119)	(0.120)	(0.120)	(0.120)
Crisis				0.118
				(0.097)
Intercept	8.819***	8.324***	9.026***	9.019***
	(0.515)	(0.521)	(0.508)	(0.508)
Obs.	1252	1252	1252	1252
Adj.R2	0.470	0.470	0.460	0.460

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CHAPTER 4: FAMILY TIES AND FIRM PERFORMANCE. EMPIRICAL EVIDENCE FROM EAST ASIA

Abstract

We investigate the impact of family ties on firm performance in East Asia. We build a proxy of family ties using objective and subjective measures of family ties taken from the World Value Survey. Our findings indicate that family firms with strong family ties exhibit superior performance relative to family firms with weak ties. In addition, family firms with strong familial relationships are likely to achieve a competitive advantage over nonfamily firms; meanwhile family firms with weak ties underperform nonfamily firms. Our results are robust in terms of alternative firm performance measures, family firm classification, heteroskedasticity, endogeneity and different econometric methods.

Keywords: Family ties, Family firm, Firm performance, Asia

JEL classification: G3, G32,

4.1   Introduction

The research on the impact of family involvement on firm performance has been one of the fastest growing fields among the family business literature for the last three decades (Pindado and Requejo, 2015, Daspit et al., 2018). Most empirical studies primarily distinguish family firms from nonfamily firms, which assumes that family firms are homogenous. However, the literature shows that family firms are divergent and heterogeneous (Dyer, 2018, Chrisman et al., 2005, Nordqvist et al., 2014). Chrisman et al. (2012) argue that researchers must *"explain the variations among family business"* (p. 267) in studying family business. Therefore, the question regarding which feature of family firms contributes to firm performance remains unanswered.

Agency theory argues that family firms should perform more effectively than nonfamily firms since the principals (owners) are also the agents (managers), agency costs are naturally mitigated (Jensen and Meckling, 1976). Founding families are also able to effectively interact and monitor managers from outside due to gaining superior knowledge of family affairs from direct involvement in the firm's activities (Anderson and Reeb, 2003a). In addition, founding families with long-term management approach and undiversified investments have a lower preference for risky high-growth investment (Carney, 2005), which reduces agency costs between firms and creditors (Anderson et al., 2012).

According to the resource-based view (RBV), family firms generate unique resources/assets in various forms such as human resources (i.e., family members are highly motivated, loyal, and well trained), social capital (i.e., family members use their inside/outside social connections and contribute to a firm's business), and physical/financial capital (i.e., family members use personal assets to support the business) (Chua et al., 1999, Carney, 2005, Dyer, 2006). These resources provide family firms with a competitive advantage over nonfamily firms.

Both agency theory and RBV provide useful frameworks to explain the performance of family firms (Dyer, 2018, Pindado and Requejo, 2015, Dinh and Calabrò, 2019). However, they seem not sufficient enough to identify how different features of family firms contribute to their performance. For example, family firms have a lower agency cost due to high trust within the family members and common family goals; on the other hand, they might produce a higher agency cost due to the fact that family firms may have to incur expenses related to dealing with family conflicts, or suffer from free riders who are irresponsible for the value of firm (Dyer, 2018). In addition, family bonds do not always generate assets, they may generate liabilities. Sometimes the accountability is more difficult within family firms due to the integration of family and business financial resources from which family members have greater incentives to be more opportunism. Family firms may face with nepotism or kinship issues, leading to assigning family members in management position due to familial relationships rather than their ability. This reduces deleteriously the value of firm. Besides, families can also take assets out of businesses for family needs (Haynes et al., 1999), putting the firm at risk.

In addition, empirical evidence seems puzzled and challenge theoretical expectations. In more details, family involvement contributes positively to financial performance. McConaughy et al. (2001) and McConaughy et al. (1998) show that firm value is larger when controlling ownership is in the hands of family. Anderson and Reeb (2003a) show that performance of S&P 500 firms is higher for firms with founding family ownership. van Essen et al. (2015) conclude that family firms enjoy performance-enhancing advantages. Similarly, Barontini and Caprio (2006) find that family-controlled firms with outside CEOs have significantly higher valuation and operating performance in Europe. However, family firms with family CEOs do not perform better than nonfamily firms. Yuan et al. (2008) provide evidence that family-controlled firms

perform significantly better than state-owned firms in China, meanwhile Silva and Majluf (2008) observe that family involvement has significant impact on firm performance in China. Huang et al. (2015) show that employees in family firms are more satisfied than employees in nonfamily firms during the recent financial crisis. In turn, employee satisfaction affects firm performance.

On the other hand, several papers report a negative impact of family on firm performance in many countries: Claessens et al. (2002) for several Southeast Asian countries; Bloom and Van Reenen (2006) for France, Germany, Great Britain, and United State; Cronqvist and Nilsson (2003) for Sweden; and Morck et al. (1998) for Canada. Braun and Sharma (2007) find that when CEO duality exists, family firms do not perform better than nonfamily firms, and when nonduality exists, family firm performance is negatively associated with family ownership level. Filatotchev et al. (2005) show that family involvement is not associated with performance among Taiwan public family firms. Villalonga and Amit (2006) find that family firms do not have better performance when the founder is not active. O'Boyle et al. (2012) show that family firms are neither outperformed nor underperformed by firms.

These, therefore, compel us to integrate family capital theory with agency theory and RBV to shed light under which conditions family contributes positively to firm performance, and under which conditions family has negative effects on performance.

According to family capital theory, *"Family businesses with high levels of family capital possibly do hold a sustained competitive advantage over family businesses with low levels of family capital and/or businesses"* (Hoffman, 2006, p. 142). Family capital is nurtured and fostered in an environment where family ties are strong and absent where family ties are weak. Hence, we expect that family firms with strong family ties can generate higher performance

relative to nonfamily firms and family firms with weak family ties. The central argument is that family firms with strong family ties face lower agency costs due to common goals and core values (Nahapiet and Ghoshal, 1998), and produce more unique sources for creating a competitive advantage such as reputation and long-standing relationships with other stakeholders (Burt, 2009, Gomez-Mejia et al., 2001).

In contrast, family firms with weak family ties do not have a competitive advantage over nonfamily firms. Family members with weak connections are likely to have competing goals and a lack of family values as a benchmark (Lansberg, 1999). As a result, the conflict among family members is high, which creates high agency costs. In addition, an environment of weak family ties does not foster the high level of trust or family language, which is distinct to family firms, making information transformation less effective.

We focus on family ties in investigating the impact of family involvement on firm performance. The reason is that family ties are one of the most important factors that influence family members' behaviors (Alesina and Giuliano, 2014). More importantly, family ties are unique to only family firms as they cannot be imitated or acquired in the strategic factor markets (Barney, 1986). Studying family ties, therefore, help to distinguish family effect from concentrated ownership or managerial ownership effect, which also exists in other businesses. Our main research question is: "*Do family ties play an important role in determining firm performance?*"

East Asia provides a rich contextual environment for studying the impact of family ties on firm performance. This region is divergent in both institutions and cultural values, which are largely different from the U.S where the majority of family studies are conducted (Barkema et al., 2015, Ang et al., 2013). Particularly, informal institutions play significant role in shaping

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individuals' behaviors where formal system is still constructed (Helmke and Levitsky, 2004). Scholars have long-portrayed East Asia as distinct from Europe and North America based on extended family co-residence and family ties (Goode, 1963, Reher, 2004). In addition, the Asian business landscape is also characterized by the informal nature of stakeholder relations, which is different from Western business view. Hence, the impact of family on family business is expected to be significant in this region.

We investigate how family ties influence firm performance in East Asian countries including South Korea, Taiwan, Indonesia, Malaysia, Singapore, the Philippines, Thailand, and Hong Kong.[23] Our data spans from 2000 to 2017 and covers 872 of the largest publicly traded firms. Our main findings indicate that family ties play an important role in determining firm performance. Family firms with strong family ties exhibit superior performance relative to nonfamily firms or family firms with weak family ties. In contrast, family firms with weak family ties generate the lowest performance among firms. The results suggest that only family firms with strong familial relationships can generate a better performance over nonfamily firms, whereas family firms with weak family ties negatively influence firm performance. Our results are robust in terms of heteroskedasticity, alternative performance measures and proxies for a family firm, and different econometric methods.

Our paper contributes to family business and finance literature in several ways. First, it enriches family business literature by focusing on the unique feature that distinguishes family firms from nonfamily firms, that is, family ties. Previous empirical studies comparing family firms with nonfamily firms have not explicitly identified the effect of *family* on performance[24]

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[23] We acknowledge that Hong Kong is a special administrative region rather than a country, but to preserve the continuity of the discussion, we refer to it as a country (Carney & Child, 2013).

[24] A notable exception is GOMEZ-MEJIA, L. R., NUNEZ-NICKEL, M. & GUTIERREZ, I. 2001. The role of family ties in agency contracts. *Academy of management Journal,* 44**,** 81-95.

(Dyer, 2018). By distinguishing family firms with strong family ties from family firms with weak family ties, we capture the heteroskedasticity of the family firm as well as the dynamic effect of family on firm performance. To our knowledge, this is the first study that investigates the impact of family ties on firm performance.

Second, there has been a greater surge in family business research on 'Western' family firms rather than on 'Asian' family firms, with 73% of family business research focusing on North American and European family enterprises (De Massis et al., 2012). Given that the number of studies on 'Asian' family firms is still limited (De Massis et al., 2012), this paper fills this gap by offering further insights into the effect of family ties on firm performance within Asia. This is important as family firms are not only dominant but also a long-lasting organizational form in this region (Claessens et al., 2000, Carney and Child, 2013).

Third, this paper contributes to the growing area of finance literature which suggests that culture plays an important role in financial outcomes.[25] We add a new dimension to the linkage between culture and financial outcomes by focusing on one of the most primitive institutions in society: family ties. In line with findings in the literature on the effect of culture on performance (De Jong and van Houten, 2014), our findings suggest that family ties in family firms diversely affect the firms' performance. The findings shed light on the inconclusive results of previous studies on family firm performance versus nonfamily firms.

The rest of the paper is structured as follows. Section 2 reviews the literature and proposes hypotheses. Section 3 presents the data and methodology. Section 4 discusses the results. Section 5 provides the conclusion.

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[25] Among these is Ahern et al. (2012) who focus on the impact cultural distance has on the outcome of international takeover decisions. Hutzschenreuter and Voll (2008) and De Jong and van Houten (2014) explore the role of cultural diversity in the context of multinational organizations and how cultural diversity within these organizations affects their performance. CHO, S.-Y. 2021. Social Capital and Innovation in East Asia. *Asian Development Review,* 38**,** 207-238. shows that social norms and institutional trusts play a key role in contributing to innovation in East Asia.

4.2 Literature review and hypothesis development

4.2.1 Agency theory

According to classic agency theory, family firms have lower agency costs than nonfamily firms. Hence, family governance is more efficient in creating firm value. Jensen and Meckling (1976) argue that agency costs are less severe in family firms since the familial relationships between owners and managers reduce the opportunistic behaviors of managers and increase the propensity to carefully conserve resources. Even having outside CEOs, family firms still have lower agency costs since founding families, as large block-holders and undiversified investors, spend more time on and put more effort into monitoring managers (Anderson and Reeb, 2003a). As a result, family firms are likely to outperform nonfamily firms. In addition, family owners with survivorship concerns are less likely to pursue risky investments, which is in line with creditors' interest, reducing agency cost between family firms and creditors (Carney, 2005).

However, the agency costs between family controlling and minority shareholders are borne. By having superior information and management position, founding families have high opportunities to expropriate minority shareholders' wealth (Demsetz and Lehn, 1985). In addition, the separation of control from cash flows rights in most family firms provides greater incentives and ability for controlling families to exploit minority shareholders. Managers of family firms may act not towards the entire business but towards the family itself (Bertrand and Schoar, 2006). Founding families who own a group of publicly traded and private firms may divert resources from public firms to private firms (Chrisman and Patel, 2012, Block, 2012). In addition, family members with different views of distribution ownership, compensation, risk, and responsibility may resort to arguments (Schulze et al., 2003, Faccio et al., 2001). Family

members whose ownership is minor can free ride on the controlling owners' equity. Therefore, family firms are likely to underperform nonfamily firms.

4.2.2 Resourced-based view

Under the RBV framework of Habbershon and Williams (1999), the strong integration of family and business generates distinctive features which build a competitive advantage for family firms (Chua et al., 1999, Hoffman et al., 2006, Carney, 2005).

Family firms can have several advantages in various forms of social, human, and financial capital. Family firms have more advantages in building social connections due to their ability to foster and nurture long-standing relationships across generations (Dyer, 2006, Carney, 2005). Stakeholders prefer to develop personal relationships with family since commitments are more enduring and trusted than commitments by nonfamily and myopic managers of nonfamily firms. Family firms have lower transaction costs and more effective information flows, especially in terms of private information, due to the close relationships and the high level of trust in family firms (Lin, 2002, Tagiuri and Davis, 1996, Daily and Dollinger, 1992).

In addition, a family-oriented workplace results in more inspired and loyal employees (Ward, 1988, Ward, 1997). As the family name is "on the building," family members are more flexible about working long hours in order to help the firm succeed (De Rosenblatt et al., 1985). Finally, concerned with the longevity of the business through the generations and long-term financial security protection, family members provide low cost and 'patient' capital (Aronoff and Ward, 1995). Sirmon and Hitt (2003) assert that 'survivability capital' can provide a competitive advantage to a family firm during adverse economic times, especially after an unsuccessful extension or new market venture.

Family bonds may also generate disadvantages. Family firms may face unqualified human resources if family members are assigned to management positions due to nepotism, kinship, or distrust of members rather than recognition of employee ability. "Unfair" human resource management can lead to employees' lack of incentive to invest specific knowledge in firms (Miller et al., 2008). Indeed, nonfamily employees' sense of being "second-class citizens" may result in low employee morale and productivity. Families can also take assets out of businesses for family needs (Haynes et al., 1999), therefore putting the firm at risk. The integration of family and business financial resources may make accountability difficult, generating more opportunism on the part of the family members.

4.2.3 Family capital theory

Both agency theory and resource-based view are useful in explaining the relationship between family ownership and firm performance. However, empirical evidence seems puzzled and challenge theoretical expectations. To shed more light on mechanism underlying family business can hold competitive advantages, Hoffman et al. (2006) introduce family capital concept as an important factor in creating core competency of family business. Family capital is a special form of social capital since social capital is resources creating based relationships among people, while family capital is resources derived from relationships among family members. Ties created in the structure of families are stronger, more intense, and more enduring than those created in organizations and communities. Hence, family capital is unique and stronger relative to social capital which may exist in other types of business. Family capital theory suggests that family businesses with high level of family capital are likely to hold sustained competitive advantage over family business with low family capital and/or nonfamily businesses.

In more details, family ties foster connections between family members, creating information channels and family norm which are important factors creating core competency of family business. In other words, these family relationships shape all aspects of family business including the structure, governance, management and even transferring to next generations. In family businesses with the strong relational ties, the interaction between family members are more frequent and the history of relationship in families is trustable and endurable, family members can quickly and effectively communicate and are more willing to converge individual goals toward a collective goal within family businesses. In turn, these leading effective information channels and family norms which are important in creating sustained competitive advantages. In contrast, resources creating from social capital in nonfamily businesses are more vulnerable and can be mitigated or acquired in strategic factors markets (Barney, 1986). Therefore, family capital may be strategic resources of family firms which can lead to sustained competitive advantage in family businesses and improved family business performance. In contrast, lacking strong family ties, those rooted from family relationships may generate liabilities rather than capital to family firms. More details, with weak ties, family members may act at the expense of other family members, generating competing goals and interaction among family members occur with low level of trust.

4.2.4 Hypotheses development

There exist several competing arguments within agency theory and RBV (Dyer, 2018), and the empirical evidence remains inconclusive.[26] This is a compelling reason to integrate

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[26] O'Boyle at al. (2012) and Wagner et al. (2015) performed a meta-analysis on the effect of family on firm performance across studies. O'Boy at el. (2015) showed that family firms are neither outperformed nor underperformed by nonfamily firms. Wagner et al. (2015) found that the results depend on a family firm's classification, its measures of performance and type of family firm, and whether the firm is public or private.

family capital theory to agency theory and RBV to investigate which family factors contribute to firm performance.

Under the family capital theory framework proposed by Hoffman et al. (2006), only family firms with high family capital can gain a sustained competitive advantage. Hoffman et al. (2006) and Putnam (1993b) suggest that family firms with strong family ties are able to create family capital; while family firms with weak ties may hamper family capital. The reason for that is family firms with strong ties are able to build a high reputation that can bring benefits for their firms, such as lower monitoring and transaction costs, more efficient resource procurement, lower costs of capital, and more loyal customers (Burt, 2009). Furthermore, family firms with strong ties are able to build a high level of trust and reduce opportunistic behaviors, which helps to increase the efficiency of information exchange and cooperation (Lewicki and Bunker, 1996). In contrast, family firms with weak ties have a low reputation, a low level of trust, and a lack of family values, which may prevent these firms from creating a competitive advantage.

In addition, family firms with strong ties face less agency costs than those with weak ties since family members with strong ties usually share common goals and core values (Nahapiet and Ghoshal, 1998). Ensley and Pearson (2005) find that top management teams in family firms who share common goals, values, and trust are more cohesive. Family members often use the values or standards of a family as a benchmark to refer to (Tajfel, 1982). As a result, family members with strong family ties are less likely to act as free riders at the expense of the firm's business. In contrast, families with weak ties face high agency costs as family members with competing goals and lack of family values may seek benefits at the expense of other family members (Lansberg, 1999). A divergence in goals and self-interested behaviors are detrimental to firm performance (Kaye, 1991).

We expect that family firms with strong family ties can achieve higher performance relative to family firms with weak family ties since they are able to create a competitive advantage and face lower agency costs. We hypothesize that:

H1: Family firms with strong family ties generate higher performance relative to family firms with weak family ties.

Compared to nonfamily firms, family firms with strong family ties face less agency costs. Family members with strong family ties usually share common goals, core values, and have a high level of trust, which helps firms to avoid cumbersome and costly monitoring mechanisms. In addition, family firms with strong family ties can generate distinctive features which build a competitive advantage over nonfamily firms (Habbershon and Williams, 1999, Chua et al., 1999, Hoffman et al., 2006). With the advantage of being able to foster and nurture long-standing relationships across generations, family firms with strong family ties are better equipped to build social connections (Dyer, 2006, Carney, 2005). Stakeholders prefer to establish personal relationships with firms that have strong family ties since commitments by family are enduring and more trusted than those by myopic managers of nonfamily firms. With strong connections, family firms transfer information more effectively than nonfamily firms, especially private information (Lin, 2002, Tagiuri and Davis, 1996, Daily and Dollinger, 1992). Strong connections among family members also help to lower transaction costs as ties among family are more enduring, intense, and stronger than ties in nonfamily firms and communities (Hoffman et al., 2006). We expect that family firms with strong family ties have reduced agency costs and are able to generate unique resources over nonfamily firms. Therefore, we hypothesize that:

H2: Family firms with strong family ties generate higher performance relative to nonfamily firms.

In contrast, family firms with weak family ties may harm the family capital (Hoffman et al., 2006). The lack of ties among family members can create significant barriers to sharing information and creating knowledge. The different views on distribution ownership, compensation, risk, and responsibility can lead to fights among family members. As a result, such family firms are filled with conflict, treachery, and deceit (Schulze et al., 2003). This type of family firm may face higher agency costs as the goals of family members are divergent. Furthermore, family members whose ownership is minor may free ride on the controlling family members' wealth (Schulze et al., 2003, Lansberg, 1999). This can foster family liabilities such as competing goals, free riding, shirking, opportunism, and adverse selection (Dyer, 2018). Those counterparts outside the family may also be reluctant to invest in conflicting family firms. We expect that weak family ties within family firms negatively influence firm performance. Hence, we hypothesize that:

H3: Family firms with weak family ties generate lower performance relative to nonfamily firms.

4.3   Data and methodology

In this section, we describe data collection, the main variables, and model specification.

4.3.1 Data collection

First, we obtain ultimate beneficial ownership data from Carney and Child (2013), which covers 1,387 large publicly traded firms in nine East Asian countries: Japan, South Korea, Taiwan, Hong Kong, Singapore, Malaysia, Indonesia, the Philippines, and Thailand. From this

data, we exclude all Japanese corporations to avoid outlier effects as Japanese firms are distinctive from the rest of the firms in East Asia.[27]

Second, we exclude financial institutions following the current literature (Anderson and Reeb, 2003b, Driffield et al., 2006, Ampenberger et al., 2013). After checking for available data on firm characteristics extracted from Thomson Reuters Datastream Advance, we end up with a sample of 872 non-financial firms.

Third, we obtain merge and acquisition (M&As) data transactions from Bloomberg for the period 2000 to 2017 to control for the change in the type of ownership structure. After excluding firm-year observations of those firms that were targets of in M&A transactions and for which we could not determine ultimate ownership after M&A, we end up with 12,837 firm-year observations.

Finally, we use the World Values Survey (WVS) to measure the strength of family ties, following Bertrand and Schoar (2006) and Alesina et al. (2015). The WVS is an international social survey of seven waves, each wave cover from 1981–1984, 1990–1994, 1995–1998, 1999–2004, 2005–2009, 2010–2014 and 2017-2021, respectively. The coverage has varied depending on the wave, starting with 22 countries in the first wave (1981-1984) and reaching 80 countries in the seventh wave (in 2017-2021). This survey provides, among other things, a wide range of subjective indicators on the relationship between parents and children, and an objective measure of family attachment, including whether young adults live with their parents. The WVS has been widely used to investigate the impact of culture on economic outcomes (Bertrand and Schoar,

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[27] Having widely dispersed ownership structures, the separation of ownership and management is more important in Japanese firms than in East Asian economies (Claessens et al., 2002). The largest shareholdings in Japanese firms are widely held by financial institutions, which is very different from many economies in the region. More importantly, financial institutions and their affiliated firms often cooperate to influence the governance of corporations, which is difficult to capture using formal ownership data.

2006, Alesina et al., 2015, Alesina and Giuliano, 2010, Inglehart and Baker, 2000, Alesina and Giuliano, 2014).

4.3.2 Variables

Firm performance

We employ return on assets (ROA) as our primary proxy for financial performance. ROA is defined as net operating income before interest, tax, depreciation, and amortization (EBITDA) divided by total assets. ROA is also the most often reported measure in studies on the relationship between family involvement and firm performance (O'Boyle et al., 2012). In addition, we used return on equity (ROE) as an alternative proxy for financial performance. ROE is defined as net operating income before interest, tax, depreciation, and amortization (EBITDA) divided by common equity.

Family firms with strong vs. weak family ties

Our main explanatory variable of interest is family ties. We use data on WVS to conduct the family ties variable. Follow Alesina et al. (2015), however, we take four (out of six) questions used by the authors to measure the family ties because the remaining two questions concerning parents' responsibility and respect of parents have not been used in the survey since the fifth wave of WVS. Four questions extracted from the data on WVS that reflect the relationship between parents and children, and the attitudes to family are followings:

1. Living with parents: The question is an objective indicator of family strength and measures whether a young adult is living at home with his/her parents. The answer yes takes 1 value, otherwise 0. By studying differences between weak and strong family ties in Europe, Reher David (1998) claims that *"the strength and weakness refers to cultural*

patterns of family loyalties, allegiances, and authorities which are reflected in demographic patterns of co-residence with adult, children and older family members."

2. Making parents proud: The question asks the respondents to agree or disagree with the following statement: "One of the main goals in life has been to make my parents proud." The scale ranges from 4, strongly agree, to 1, strongly disagree.

3. Obeying parents: The question seeks to identify which quality respondents consider to be especially important in their relationship with their children. The question asks whether obedience is an important quality for children. The response achieves the value of 1 if obedience is mentioned and 0 if it is not.

4. Family is important: The question assesses how important the family is in one person's life. Response is assigned the values of 4, very important, to 1, not important at all.

Bertrand and Schoar (2006) undertake a variance decomposition analysis of family values at the individual level. They include, as possible determinants of family values, personal characteristics such as age and gender dummies, and education dummies, as well as country fixed effects. Combined, these personal characteristic variables explain only about 20 percent of the variance of the "strength of family" index in the micro data, meanwhile country fixed effects account for about 80 percent of the explained variance. This supports the argument that family norms have a larger country level component than individual characteristics. Therefore, we measure family ties at the country level. First, we measure family ties at the individual level by recording sum of score of each individual response to the four questions in eight East Asian countries. A higher number implied a stronger attachment to the family. Next, we aggregate the data at the country level by calculating mean of all individuals' scores in each country in each wave. In our sample, South Korea is surveyed from the first to the seventh wave; meanwhile

Singapore occurs in wave 4 and 6. Therefore, we take the average score of family ties at the country level from wave 4 to wave 6 for each country. The time lasts from 1999 to 2018. Using country means for our study is reliable since Alesina and Giuliano (2011) shows that family ties could be cultural values that tend to persist across generations. Furthermore, family ties are very stable overtime as shown in many different ways by Alesina and Giuliano (2010), Bertrand and Schoar (2006) and Reher (1998).

Then, we base on family ties of the country to classify the country in our sample into two groups: strong vs. weak family ties society. A country that has family ties above the family ties median is classified as a country with strong family ties. Similarly, a country that has family ties equal or below the median is classified as country with weak family ties. A family firm in the strong family ties country is considered as family firm with strong family ties; a family firm in the weak family ties country is considered as family firm with weak family ties. To classify a firm as a family firm, we follow one of the most common approaches (Claessens et al., 2000, Carney and Child, 2013, O'Boyle et al., 2012, La Porta et al., 1999, Faccio and Lang, 2000) which bases on ownership. A firm is defined as a family firm if family members represent the largest number of voting shareholders and hold at least 20% of ownership. We used the cut-off value of 10% of ownership for robustness checks.

Control variables

In our analysis, we control for an array of firm characteristics that has been shown to affect performance in previous firm performance researches.[28] We control for firm size (natural logarithm of total assets), leverage (ratio of long-term debt to the market value of a firm), growth

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[28] In terms of the influence of family involvement on firm performance, Anderson and Reeb (2003a) found that larger, more leveraged, and higher growth firms are positively associated with firm performance, whereas stock return volatility and firm age are negatively associated with firm performance.

opportunities (ratio of R&D investment to sales), risk (standard deviation of monthly stock return in 60 previous months), and firm age (logarithm of firm age).

To control for country-level factors, we include the legal origin, the anti-director rights index, and the real GDP growth rate. We control for the legal origin as agency problems across a broad variety of organizational forms are attenuated in the context of common-law institutions (Carney et al., 2015, La Porta et al., 1998). In addition, Gilson (2007) argues that family firms may gain more advantages in regimes with weak commercial law by leveraging reputation to create social capital (Sirmon and Hitt, 2003) and setting relational contracting (Gomez-Mejia et al., 2001), which functions by filling institutional voids. We control for anti-director index since it reflects how strongly the legal system protect minority shareholders against expropriation by managers and dominant shareholders (La Porta et al., 1998). The measure for anti-director rights come from LLSV (p. 1130) and it varies from 2 (lowest) to 4 (highest) in our sample depending on a country. Finally, we control for real GDP growth rate which is a measure of real economic growth in the country since economic development has influence on firm performance (Goldszmidt et al., 2011).

4.3.3 Model

We use ordinary least square (OLS) regressions to investigate the effect of family ties on firm performance. Initially, we run regression of family firm on performance to investigate whether family firms in general influence firm performance. Then, we use continuous family ties measures to run regression of family ties on firm performance among family firms. Using continuous family ties measure provides preliminary evidence on the impact of family ties on family firm performance.

However, in order to make comparison between family firms and nonfamily firms, using continuous family ties may face challenge of weak ties of a family firm against "no family ties" of a nonfamily firm. Weak ties of a family firm may be still stronger than "no family ties" within a nonfamily firm; but weak ties of a family firm may be worse than "no ties" of a nonfamily firm since weak ties may include conflicting relationships. Therefore, to shed light on the performance of family firms with different level of family ties against nonfamily firms, we classify our sample in three groups: family firms with strong family ties, family firms with weak family ties and nonfamily firms. Then, we run regression for family firms with strong family ties vs. family firms with weak family ties; family firms with strong family ties vs. nonfamily firms; and family firms with weak family ties vs. nonfamily firms. Our based line model is:

$$Performance_{it} = \beta_0 + \beta_1 FF_{it} + \beta_2 Controls_{it} + \varepsilon_i$$

where the variable *Performance*$_{it}$, the measure of financial performance of firm i in year t, is defined as (1) return on assets (ROA) – the ratio of net operating profit before interest, tax, depreciation, and amortization (EBITDA) divided to total assets; and (2) return on equity (ROE) – the ratio of net operating profit before interest, tax, depreciation, and amortization (EBITDA) divided into common equity. Our main interest variable, which we label *FF*$_{it,}$ is defined as*:* (1) *STFFvsWTFF*, a dummy variable, equals to 1 if a firm is a family firm with strong family ties, 0 if a firm is a family firm weak family ties; (2) *STFFvsNFF,* a dummy variable, equals to 1 if a firm is a family firm with strong family ties , 0 if a firm is a nonfamily firm; (3) *WTFFvsNFF*, a dummy variable, equals to 1 if a firm is a family firm with weak family ties, 0 if a firm is a nonfamily firm.

We also control for the industry fixed effect and the year fixed effect by including industry dummy variables and year dummy variables in our model, respectively.

To reduce the effect of outliers, we symmetrically winsorize all firm characteristics at 1 percent level.

4.4   Results and discussion

This section presents the main descriptive statistics and univariate results, as well as a discussion on the multivariate regression results and sensitivity analysis.

4.4.1   Descriptive statistics and univariate results

Our sample consists of eight countries in East Asia, one may concern that a country which is classified as a weak family ties society may still be strong to the rest of the world. To control for that issue, we measure family ties in almost countries around the world in seven waves from 1980 to 2020. **Figure 4-1** shows family ties in almost countries around the world in seven waves from 1980 to 2021. In all countries conducted surveyed in seven waves, family ties vary from 6.41 to 8.82. In our sample, family ties vary from 6.82 to 8.29. Therefore, in our sample, society where family ties are weak is actually weak relative to the rest of the world. Hong Kong is shown to have the weakest family ties; in contrast, Indonesia is shown to have the strongest family ties in our sample.

[Insert **Figure 4-1** here]

Table 4-1 presents the family ties and formal institutions in the East Asian countries of our sample. The countries belong to strong family ties society consist of Thailand, Indonesia, Malaysia, and the Philippines. In contrast, the countries belong to weak family ties society include Hong Kong, South Korea, Taiwan, and Singapore. Regard to institutional environment, anti-director rights vary from high (score 4) to low (score 2) in both strong and weak family ties group. English common law is present in both strong and weak family ties group.

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[Insert **Table 4-1** here]

Table 4-2 presents the correlation matrix of the variables used in the models. Regarding the correlations between the explanatory variables, there is no high correlation among them since there is no correlation coefficient larger than 0.6. Therefore, it is unlikely that we have multicollinearity problems across these variables.

[Insert **Table 4-2** here]

Table 4-3 provides descriptive statistics of the mean and standard deviations of firm characteristics. In our sample, firms are profitable with the average ROA and ROE of 11.09% and 25.82%, respectively. The average age of a firm is around 33 years old. The average size of a firm is $2.8 billion. The average long-term debt ratio is 12%. Firms borrow very differently from zero to over 60% long-term debt ratio over total assets. The level of risk among firms ranges from 1.86% to 74% with large variance.

[Insert **Table 4-3** here]

Table 4-4 presents the univariate results for firm performance and firm characteristic explanatory variables. Panel A reports the univariate results between family firms with strong family ties versus family firms with weak family ties. The former performs significantly better than the latter in both measures of ROA and ROE. In the former group, on average, ROA and ROE are 11.78% and 28.48%, respectively. Meanwhile, the latter group has an average ROA and ROE of 8.52 % and 21.51%, respectively. Family firms with strong family ties are significantly smaller in size, more leveraged, younger, and riskier than family firms with weak family ties. Family firms with strong ties have a lower level of R&D investment in R&D.

Panel B presents the results for family firms with strong family ties versus nonfamily firms. ROA in family firms is higher than in nonfamily firms, but negligible. ROE in family

firms with strong family ties is significantly higher than in nonfamily firms (28.46% vs. 26.19%). Compared to nonfamily firms, family firms with strong family ties are smaller in size, more leveraged, and riskier. They are older than nonfamily firms. In terms of R&D investment, family firms with strong family ties invest less than nonfamily firms.

Panel C presents the results for family firms with weak family ties versus nonfamily firms. Family firms with weak ties have a lower performance level than nonfamily firms in both measures of performance. The differences are statistically significant. More details, in the former group, on average, ROA and ROE are 8.52% and 21.51%, respectively. Meanwhile, the latter group has an average ROA and ROE of 11.66% and 26.19%, respectively. In terms of firm characteristics, family firms with weak family ties are larger than nonfamily firms, but insignificantly. They are older and riskier than nonfamily firms. Similar to family firms with strong family ties, they have a lower level of R&D investment and a higher level of leverage relative to nonfamily firms.

[Insert **Table 4-4** here]

4.4.2 Regression results

Our univariate tests in **Table 4-4** provide preliminary evidence of the heteroskadasticity among firm performance. More specifically, family firms with strong family ties have a better performance than nonfamily firms or family firms with weak family ties. In contrast, family firms with weak family ties perform worse compared to nonfamily firms or family firms with strong family ties. However, these univariate tests do not consider potentially significant differences in firm characteristics between three groups: family firms with strong family ties, family firms with weak family ties and nonfamily firms. To shed more light on the influence of family ties on firm performance, or in other words, we investigate whether family ties of family

firms could lead to out/under performance against others, we classify family firms into two groups: family firms with strong family ties and family firm with weak family ties for running regression. Then, we use multivariate tests to better understand how family firm status affects firm performance.

Table 4-5 reports the initial results. In columns 1 and 2, we use ROA as a dependent variable to measure firm performance, while in columns 3 and 4 we use ROE as a proxy for performance. Firstly, we report the impact of family firm in general (regardless the strength of family ties) on performance measured by ROA and ROE in Columns 1 and 3, respectively. The coefficients of *FF_General* are insignificant in both performance measures, indicating that there is insignificant difference in performance between family vs. nonfamily firms. This may imply that there are other factors of family rather than simply the involvement of family in business that influence firm performance. In addition, we regress ROA and ROE on family ties in column 2 and 4, respectively. The coefficients of *FT_Continuous* are positive and significant at the 1% level in both performance measures, indicating that family ties are positively associated with firm performance.

[Insert **Table 4-5** here]

Table 4-6 reports the main results. We run regression of firm performance on family firms with different level of family ties strength. Specifically, we regress ROA and ROE on *STFFvsWTFF* in columns 1 and 4, respectively. The coefficients of *STFFvsWTFF* is positive and statistically significant at the 1% level in both performance measures, which indicate that family firms with strong family ties exhibit superior performance relative to family firms with weak family ties. The results again suggest that family ties play an important role in determining firm

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performance. Our findings confirm the idea developed by Banfield (1967) that family ties influence economic behavior and thus economic outcomes. Our work expands on insights from the family ties literature, in line with well-known studies in the area (Alesina and Giuliano, 2014, Alesina and Giuliano, 2010, Alesina et al., 2015), and demonstrate the significant influence of the strength of family ties on financial outcomes.

We next investigate whether family firms with strong family ties perform better than nonfamily firms. Focusing on columns 2 and 5, we regress ROA and ROE on *STFFvsNFF* in column 2 and 5, respectively. The coefficients of *STFFvsNFF* are positive and statistically significant at the 1% level in both performance measures. This suggests that family firms with strong family ties perform better than nonfamily firms. The positive impact implies that strong connections among family members positively affect firm performance. Prior literature has suggested that family firms have a competitive advantage over nonfamily firms due to family firms' unique long-term orientation and ownership (Dyer, 2006, Anderson and Reeb, 2003a). The findings are in line with studies of Anderson and Reeb (2003a) and McConaughy et al. (1998), who find that shareholders achieve benefits from family involvement in a firm.

We further examined how weak connections among family members influence firm performance. Focusing on columns 3 and 6, we regress ROA and ROE on *WTFFvsNFF*, respectively. The coefficients of *WTFFvsNFF* are negative and statistically significant at the 1% level in both performance measures. Contrary to the notion that family involvement positively affects firm performance, we find relatively strong evidence that nonfamily firms exhibit superior performance relative to family firms with weak family ties. The negative impact of weak family ties on firm performance implies that it is not the involvement of family but the strength of family ties that makes the performance of a family firm superior relative to nonfamily

firms. Our findings are in line with the study of Villalonga and Amit (2006) who find that family firms only perform better than nonfamily firms when they are active. Our findings suggest that family ties play an important role in explaining the impact of family involvement on firm performance.

[Insert **Table 4-6** here]

4.4.3 Robustness checks

So far, we have documented that the strength of family ties influences firm performance. In this section, we present the findings of a range of tests that assess the robustness of our results.

Family firm classification

The literature suggests a variety of ways to define family firms. However, there exists no consensus in the literature regarding how to classify family firms (Prencipe et al., 2014, O'Boyle et al., 2012, Hernández-Linares et al., 2017). Wagner et al. (2015) find that the various results across studies depend on the way a family firm is defined. To examine whether our results are robust in terms of alternative family firm classifications, all firms in our sample are reclassified at the threshold of 10% ownership. A firm is classified as a family firm if the largest voting shareholder with 10% or more ownership is a family. We report the results of these regressions in **Table 4-7**. As can be seen, the results are unchanged. Our results strongly suggest that the strength of family ties has a significant influence on firm performance irrespective of family firm classification.

[Insert **Table 4-7** here]

Subsample

The literature suggests that the 2008 Global Financial Crisis exposed firms to significant external shocks, such as low financial liquidity and downturn in revenue (Grillitsch and

Tavassoli, 2018, Kim et al., 2015). This state of disequilibrium tested the ability of firms to assemble resources to respond to the external shocks for their survival. Prior studies have shown that family firms have a competitive advantage over nonfamily firms during adverse economic times due to family firms' unique long-term orientation and governance (Sirmon and Hitt, 2003, Aronoff and Ward, 1995). In essence, family members who focus on the longevity of the family business with a desire to pass it to next generations tend to provide low cost and 'patient' capital to the family firm, especially in a low financial liquidity situation (Aronoff and Ward, 1995). Grillitsch and Tavassoli (2018) find that the effect of cultural factors on economic outcomes is more pronounced during/after a financial crisis. Therefore, we investigate whether the effect of family ties on firm performance changed after the 2008 Global Financial Crisis. We conduct our regression analysis on a subsample from 2010 to 2017. We report the results in **Table 4-8**. Our findings suggest that the impact of the strength of family ties on firm performance remains highly significant.

[Insert **Table 4-8** here]

Mediating effect of R&D investment and level of debt of the family firm-performance relationship

Prior literature has suggested that family firms can be characterized somewhat differently from nonfamily firms in terms of strategy, structure, and human-resource systems (Daily and Dollinger, 1992, Chrisman and Patel, 2012, Molly et al., 2012, Choi et al., 2015, Michiels and Molly, 2017, Anderson and Reeb, 2003b, Carney et al., 2015). This could be attributed to the involvement of the family (Carney et al., 2015). This raise issues on whether family involvement influences firm strategies such as level of debt or R&D investment, which, in turn, affect firm performance (Mosakowski, 1993, Miller et al., 2008). To address this issue, we employ

structural equation modeling (SEM) to examine both the direct and indirect effects of family ties on firm performance. R&D investment and leverage are used as mediating factors in the relationship between family ties and firm performance. The results of these regressions are presented in **Table 4-9**.[29] The results from the alternative econometric technique are quantitatively and qualitatively similar to the prior results of OLS estimation.

[Insert **Table 4-9** here]

Additional control variables

Informal institutions play an important role along with formal institutions in shaping the behaviors of individuals and organizations (Berrone et al., 2020), especially in Eastern regions where formal institutions are still under developed (Helmke and Levitsky, 2004). Particularly, trust is a crucial element in economic transactions and functioning of markets, organizations and societies (Porta et al., 1996, Knack and Keefer, 1997). Arrow (1972) claims that "*It can be plausibly argued that much of the economic backwardness in the world can be explained by the lack of mutual confidence*" (p.357). Literature has shown that trust plays a significant role in promoting cooperation (Porta et al., 1996), strengthening economic performance (Knack and Keefer, 1997), increasing investment (Bottazzi et al., 2016) and enhancing firm performance (Goergen et al., 2013). Like specific trust, generalized trust has been shown to link to improvement of the performance of governance modes. The cost of economic activities whose results depend on the future actions of participants decreases in high trust environments (Van Hoorn, 2017, Bloom et al., 2012, Cingano and Pinotti, 2016, Knack and Keefer, 1997). Therefore, we control for the level of generalized trust in society, considering that social trust is

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[29] In Table 8, we present the main results of regressing performance on family ties. Although not reported in the table, the effect of family ties on leverage and R&D were statistically significant at the 1% level.

even worth noting when formal institutions are weak due to the existence of a substitutive effect between formal and informal institutions (North, 1994).

Trust can be general as perceived trustworthiness or a belief whether unknown others are trustworthy (Putnam, 1993a, Fukuyama, 1995). Following previous studies, we measure generalized trust from World Value Surveys that uses the following question: *"Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?"* (Vanneste and Gulati, 2022, Goergen et al., 2013, Huang et al., 2021, Porta et al., 1996). The percentage of people answering yes is used as proxy for the level of generalized trust in a country. We report the results in **Table 4-10**. Our findings firmly confirm initial results.

[Insert **Table 4-10** here]

Alternative measure of family ties

Initially, we use a binary family dummy variable to proxy for a family firm with weak ties versus a family firm with strong ties or a nonfamily firm rather than continuous family ties variable. This approach protects us from a bias of making any assumption that weak ties of a family firm are more or less valued than "no family ties" in a nonfamily firm. In details, if we run a regression on family ties as a sum of the scores of four questions, "no family ties" in a nonfamily firm is assumed to be less valued than weak family ties in a family firm (zero value for "no family ties" versus low but positive value for weak family ties). In contrast, if we run a regression on family ties index, "no family ties" in a nonfamily firm is assumed to be more valued than weak ties in a family firm (zero family ties index in a nonfamily firm versus negative family ties index in a weak ties family firm). Therefore, employing a binary family dummy

variable provides an open-minded lens on the influence of family ties on firm performance, particularly weak family ties versus "no family ties".

However, one may argue that using a binary family dummy variable that equals one when the resulting value is over the median, and zero otherwise may result in a loss of information since it does not capture the variation of family ties. This compels us to use the family ties index for three reasons. First, our initial findings show that family firms with weak ties have an inferior performance versus nonfamily firms. The results show that "no family ties" in a nonfamily firm have even more value than having family ties but "weak" in a family firm. Using family ties index is safe from subjectively making assumptions on the values of weak ties versus "no family ties". Second, the weight of the four measures of family ties is not uniform: whereas the first and the third ones are dummy variables (i.e., equal 0 or 1), the other two measures range from 1 to 4. Third, family ties index presents variation of family ties.

We undertake a principal component analysis to summarize these four variables into a single index, following previous studies (Alesina and Giuliano, 2014, Bertrand and Schoar, 2006). Principal component analysis (PCA) captures the variance in the dataset by creating a linear combination of the original variables.[30]For our analysis, family ties index for each individual is the first component from a principal component analysis of the four family values variables described above. After calculating family ties index of all individuals in seven waves, we take the median of family ties index of all individual respondents in each country as a proxy for family ties of the country. The WVS is an unbalanced panel data in which country participation differs for different waves. Since the survey result, regardless of different waves,

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[30] More specifically, PCA is a technique that can be used to recap the information contained in an initial set of variables into fewer variables. A (PCA) generates new variables (the principal components) that are linear associated with the original variables. The first principal component is the linear combination of the original variables that captures the largest variance in the initial dataset.

reflects the 'absolute value' of each survey question, applying PCA over an unbalanced panel at once is valid. We report the results in **Table 4-11**. The results show that only strong family ties generate superior performance over "no family ties" in nonfamily firms. In contrast, weak family ties result in inferior performance over "no family ties" in nonfamily firms.

[Insert **Table 4-11** here]

Endogeneity issues

Propensity score matching (PSM) approach

There may be a potential endogeneity problem in our study. The endogeneity problem may arise from three different sources: (i) measurement error, (ii) potential "reverse causality", and (iii) omitted variables. Family ties is considered stable across generations (Alesina and Giuliano, 2014) while firm performance reflect financial outcomes of a firm in certain time. Therefore, our study is safe from reserve causality issue. However, our study is potentially subject to the issues of omitted variables that may lead the variable of interest to correlate with the error term, yielding incorrect inferences. In our study, family firms and nonfamily firms may systematically differ in firm-level characteristics. These differences may create a bias of observable self-selection associated with family firm status (Chen et al., 2014). Therefore, we use propensity score matching (PSM) to address endogeneity arising from observable self-selection bias (Lee and Bose, 2021, Chen et al., 2014). We construct a matched sample of family firms and nonfamily firms by using the one-to-one "nearest neighbors" propensity score matching (PSM) technique. In the first stage of PSM, to estimate propensity score matching, we run a logistic regression with a dummy dependent variable which equals to 1 for a family firm and 0 for a nonfamily firm. Then we match, without replacement, a firm-year observation with *FF_General* equal to 1 (a treatment observation) against another firm-year observation with

FF_Generral equal to 0 (a control observation). In PSM, we employ for the same set of control variables for firm characteristics such as firm size, leverage, growth opportunity, risk, firm age, industry and year in the first- and second-stage regressions to ensure balance between the treatment and control groups in the matched sample (Shipman et al., 2017). We use the caliper matching method with a caliper of 1% (Dehejia and Wahba, 2002).[31] Then we use matched sample size for PSM's second-stage model, in which we run an ordinary least squares (OLS) regression with the matched observations. The results firmly confirm our previous results of the impact of family ties on firm performance (**Table 4-12**).

[Insert **Table 4-12** here]

Instrumental variable approach

To address the potential endogeneity problem, we use another approach which is instrumental-variable two-stage least square (IV 2SLS) method for our regression analysis. In the IV 2SLS model, we model family ties index as an endogenous regressor. To meet the exclusion restrictions necessary requirement, we include all variables that enter the second-stage (outcome) regression. We employ religion as an instrumental variable. Religious beliefs or in a broader sense spiritual values can fundamentally influence individuals, family, and corporate decisions (Astrachan et al., 2020, Hilary and Hui, 2009, Balog et al., 2014). Abbott et al. (1990) find that religious institutions sponsor and support activities that bring family members together. Related religious activities provide opportunities for family members to interact and share experience with another, potentially enhancing the quality and closeness of their relationships (King, 2010, D'Antonio et al., 1982). Mahoney et al. (2003) show that religions play a salient role in family relationships.

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[31] The term "caliper" is the difference in predicted probabilities between the treatment and control observations (Dehejia and Wahba, 2002).

Table 4-13 presents the results of regressing performance on family ties index. We use religious affiliation dummy variable as an instrumental variable for family ties index. We include *Religion* dummy variable in the first stage of the model. *Religion* equals 1 if more than 50 percent of population of a country follows a certain religion.

Column 1 of **Table 4-13** displays first-stage regression results. The results suggest that religion influences the strength of family ties. Focusing on column 1, the first-stage regression shows that religious affiliation coefficients are positively and significantly related to family ties index at the 1% level. We conduct two tests that provide support for our choice of instrument and report the results in the bottom of Column 1 of **Table 4-13**. We use the Durbin-Wu-Hausman (DWH) chi-squared test to test whether family ties index is endogenous. The null hypothesis is that family ties index is exogenous with respect to firm performance and the rejection of this hypothesis implies that family ties index is indeed endogenous and validates the IV approach. To test whether our instrument is relevant, we calculate the Cragg-Donald statistic, which is 4,925.91 and is higher than the 11.04 critical value reported by Stock and Yogo (2005). This implies that our instrument for family ties index is not weak.

Columns 2 and 3 of **Table 4-13** provide second-stage (outcome) regression results. After controlling for endogeneity, we observe that the results of IV 2SLS regression are similar to OLS regression results. Our conclusion is that the results are robust to endogeneity issues.

[Insert **Table 4-13** here]

4.5   Conclusion

We show that family ties play an important role in explaining firm performance. Using profitability-based measures of firm performance, ROA and ROE, we find that our sample of

family firms with strong family ties exhibit superior performance relative to family firms with weak family ties. Furthermore, family firms with strong family ties outperform nonfamily firms, whereas family firms with weak family ties underperform relative to nonfamily firms. The findings indicate a significant influence of family ties on firm performance. Our results also suggest that it is not involvement but family ties within family firms that create a competitive advantage over nonfamily firms. Our results are robust in terms of alternative performance measures, family firm classification, heterogeneous and alternative econometric estimation methods.

Our findings have implications for future studies on the relationship between family firms and performance. Consistent with Dyer (2018), we show that family firms are able to generate family assets or liabilities. While the former provides family firms with a competitive advantage over firms, the latter result in family firms underperforming relative to nonfamily firms. Studying family ties that are unique to family firms, as they cannot be imitated or acquired in the strategic factor markets (Barney, 1986), helps us to identify the impact of family on firm performance; it also helps us to distinguish the impact of family from ownership concentration and managerial ownership on performance. Overall, our study suggests that family relationships in family firms are the first-order factor that generates differences in performance between family firms and nonfamily firms, as well as reflecting the diversity within family firms.

Appendix C: Definition of variables and sources

Variables	Definition	Source
Firm performance		
ROA	Ratio of operating income before interest, tax, depreciation, and amortization (EBITDA) to total assets.	Datastream
ROE	Ratio of operating income before interest, tax, depreciation, and amortization (EBITDA) to common equity.	Datastream
Family firms with family ties		
FF_General	A dummy variable equal to 1 if a firm is a family firm, otherwise 0.	WVS
FT_Continous	Family ties of a family firm, measured as sum of score of 4 questions as follows: 1. Whether a young adult is living at home with his/her parents. The answer yes takes 1 value, otherwise 0. 2. "One of the main goals in life has been to make my parents proud." The scale ranges from 4, strongly agree, to 1, strongly disagree. 3. Whether obedience is an important quality for children. The response achieves the value of 1 if obedience is mentioned and 0 if it is not. 4. How important the family is in one person's life. Response is assigned the values of 4, very important, to 1, not important at all.	WVS
FF_General	A dummy variable equal to 1 if a firm is a family firm, otherwise 0.	WVS
STFFvsWTFF	A dummy variable equal to 1 if a family firm has strong family ties, 0 if a family firm has weak family ties.	WVS
STFFvsNFF	A dummy variable equal to 1 if a family firm has strong family ties, 0 if a firm is a nonfamily firm.	WVS
WTFFvsNFF	A dummy variable equal to 1 if a family firm has weak family ties, 0 if a firm is a nonfamily firm.	WVS
Firm characteristics		
SIZE	Logarithm of total assets.	Datastream
AGE	Logarithm of firm age, equal to the difference between observed year and year of establishment.	Datastream
LEV	Ratio of long-term interest-bearing debt to market value of a firm.	Datastream
RD	Ratio of R&D investment to sales.	Datastream
RISK	Standard deviation of stock price for previous 60 months.	Datastream
Country level variable		
RealGDPgrowthrate	Real GDP growth rate.	World Bank
Legal_origin	Dummy variable that equals to 1 if legal origin of the country is common-law, otherwise 0.	La Porta et al. (1998)
Anti-Director_Right	Anti-director rights measure how strongly the country's laws favor outside investors against managers and dominant shareholders. For each of the anti-director measures (one share - one vote, proxy by mail allowed, shares are not blocked before shareholders' meeting, cumulative voting or proportional board representation, legal mechanisms against oppression, preemptive rights to new issues, percentage of share capital to call an extraordinary shareholder meeting less or equal to 10%) the country gets a 1 if the investor protection is in the law. The anti-director rights index	La Porta et al. (1998)

	is the sum of these measures.	
TrustinPeople	"Generally speaking, would you say that most people can be trusted or that you can't be too careful in dealing with people?". The percentage of people answering yes is used as proxy for level of generalized trust in a country	WVS
Religion	A dummy variable equal to 1 if more than 50 percent of population of a country follows a certain religion, otherwise 0.	Central Intelligence Agency
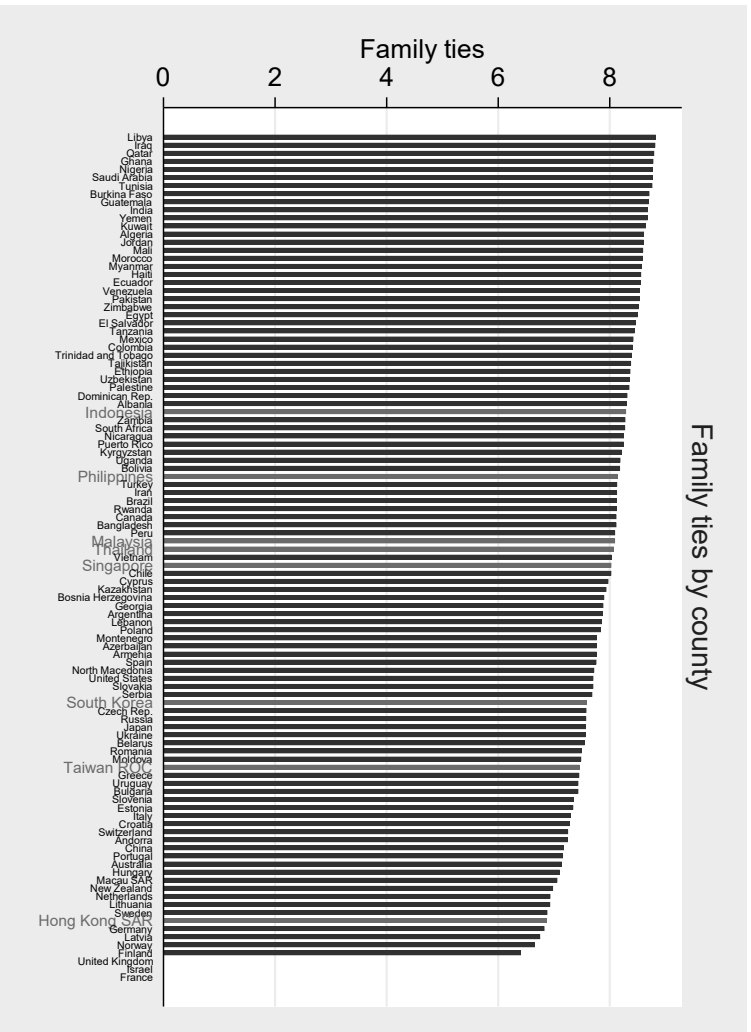
Figure 4-1: Family ties by country

Table 4-1: Family ties and formal institutions in East Asia countries

Country	Family ties	Law origin	Anti-director rights
Weak family ties countries			
Hong Kong	6.87	English	4
South Korea	7.59	German	2
Taiwan	7.28	France	3
Singapore	8.03	English	3
Strong family ties countries			
Malaysia	8.09	English	3
Philippines	8.14	France	4
Indonesia	8.29	France	2
Thailand	8.07	English	3

	ROA	ROE	SIZE	LEV	R&D	RISK	AGE	RealGDPgrowthrate	Legal_origin	Anti_Director_Index
ROA	1									
ROE	0.584***	1								
SIZE	0.053***	0.154***	1							
LEV	-0.175***	0.048***	0.297***	1						
R&D	-0.007	-0.069***	0.073***	-0.099***	1					
RISK	-0.143***	-0.029***	-0.243***	0.099***	-0.033***	1				
AGE	-0.109***	-0.056***	0.111***	0.015	-0.117***	-0.036***	1			
RealGDPgrowthrate	0.094***	0.087***	-0.103***	-0.020*	-0.105***	0.126***	-0.047***	1		
Legal_origin	-0.054***	-0.084***	-0.170***	-0.042***	-0.253***	-0.172***	-0.065***	0.026**	1	
Anti_Director_Index	-0.124***	-0.159***	-0.179***	-0.041***	-0.090***	-0.117***	0.105***	-0.026**	0.466***	1

Table 4-2: Correlations matrix

Table 4-3: Desctiptive statistics of firm characteristics

Variable	N	Mean	SD	Q1	Q2	Q3
ROA	15501	11.087	10.846	5.799	10.468	16.353
ROE	15501	25.821	31.654	12.285	22.803	35.242
SIZE	15746	13.331	1.772	12.126	13.251	14.511
LEV	15194	12.442	14.219	0.213	7.537	20.039
RD	15501	0.622	1.977	0.000	0.000	0.065
RISK	15117	16.713	11.295	9.669	13.758	20.359
AGE	15501	3.282	0.782	2.890	3.401	3.784

Table 4-4: Univariate results of firm performance and firm characteristics

This table reports T-test results of performance and firm characteristics in family firms with strong family ties, family firms with weak family ties, and firms

	ROA	ROE	SIZE	LEV	AGE	RD	RISK	Observations
Panel A: Family firms (FF) with strong family ties (FT) versus family firms with weak family ties								
FF with strong FT	11.78	28.46	12.59	13.52	3.32	0.04	18.92	4073
FF with weak FT	8.52	21.51	13.6	12.78	3.45	0.48	16.69	3300
T-test	(11.80)***	(8.05)***	(24.04)***	(1.94)	(7.09)***	(16.63)***	(7.16)***	7373
Panel B: Family firms (FF) with strong family ties (FT) versus nonfamily firms(NFF)								
FF with strong FT	11.78	28.46	12.59	13.52	3.32	0.04	18.92	4073
Nonfamily firm	11.66	26.19	13.55	11.9	3.21	0.9	15.84	10088
T-test	(0.57)	(3.66)***	(28.87)***	(5.69)***	(8.05)***	(22.98)***	(13.50)***	14161
Panel C: Family firms (FF) with weak family ties (FT) versus nonfamily firms (NFF)								
FF with weak FT	8.52	21.51	13.6	12.78	3.45	0.48	16.69	3300
Nonfamily firms	11.66	26.19	13.55	11.9	3.21	0.9	15.84	10088
T-test	(14.06)***	(7.36)***	(1.34)	(3.04)**	(15.10)***	(9.39)***	(3.84)***	13388

T-test of financial performance and firm characteristics in family firms with strong family ties, family firms with weak family ties, and firms. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

Table 4-5: Firm performance and family firm status and family ties

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1–2, and Return on Equity (ROE) in columns 3–4. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main interest explanatory variables are: (1) *FF_General*, a dummy variable that equals 1 if a firm is family firm, otherwise 0; (2) *FT_Continuous*, family ties of a firm; (2); Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ROA		Dependent variable: ROE	
	(1)	(2)	(3)	(4)
FF_General	-0.58		0.16	
	(0.50)		-1.26	
FT_Continuous		4.165***		11.540***
		(0.955)		(2.402)
SIZE	0.326*	0.486***	2.237***	2.622***
	(0.18)	(0.178)	(0.41)	(0.404)
LEV	-0.153***	-0.163***	(0.03)	-0.055
	(0.01)	(0.014)	(0.04)	(0.038)
R&D	-0.16	-0.103	-1.204***	-1.083***
	(0.12)	(0.117)	(0.22)	(0.216)
RISK	-0.150***	-0.151***	-0.131**	-0.125**
	(0.02)	(0.021)	(0.05)	(0.052)
AGE	-1.301***	-1.082***	-1.845**	-1.157
	(0.34)	(0.341)	(0.79)	(0.828)
Legal_origin	-1.221**	-0.814	-2.835**	(1.718)
	(0.56)	(0.559)	(1.35)	(1.366)
Anti_Director_Index	-1.880***	-1.785***	-5.836***	-5.430***
	(0.42)	(0.411)	(1.01)	(0.982)
RealGDPgrowthrate	0.371***	0.275***	0.867***	0.644***
	(0.07)	(0.070)	(0.20)	(0.194)
Intercept	19.100***	15.162***	15.867**	5.542
	(2.96)	(3.147)	(6.78)	(7.038)
Industry fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Obs.	12791	5715	12791	5715
Adjusted_R^2	0.15	0.15	0.09	0.10

Table 4-6: Firm performance and family ties – Threshold 20%

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1 – 3, and Return on Equity (ROE) in columns 4 – 6. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main interest explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is family firms with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with strong family ties, and 0 if a firm is firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with weak family ties, and 0 if a firm is firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ROA			Dependent variable: ROE		
	(1)	(2)	(3)	(4)	(5)	(6)
STFFvsWTFF	4.240***			9.474***		
	(0.73)			(2.04)		
STFFvsNFF		0.954***			3.883**	
		(0.25)			(1.66)	
WTFFvsNFF			-2.445***			-4.073***
			(0.53)			(1.40)
SIZE	0.904***	0.411***	0.526***	3.487***	2.117***	2.865***
	(0.26)	(0.08)	(0.20)	(0.70)	(0.43)	(0.44)
LEV	-0.138***	-0.171***	-0.158***	(0.03)	(0.04)	(0.06)
	(0.02)	(0.01)	(0.02)	(0.05)	(0.04)	(0.04)
R&D	-0.22	-0.129**	-0.15	-0.950**	-1.070***	-1.048***
	(0.33)	(0.06)	(0.13)	(0.37)	(0.25)	(0.22)
RISK	-0.149***	-0.154***	-0.132***	-0.11	-0.166***	-0.07
	(0.02)	(0.01)	(0.03)	(0.07)	(0.06)	(0.06)
AGE	(0.44)	-1.291***	-1.418***	(0.49)	(1.21)	-1.929**
	(0.49)	(0.16)	(0.36)	(1.29)	(0.95)	(0.83)
Legal_origin	-0.39	-1.020***	-1.11	-3.518*	-2.11	0.24
	(0.78)	(0.23)	(0.75)	(2.11)	(1.43)	(1.70)
Anti_Director_Index	-1.835***	-2.102***	-1.493***	-4.897***	-6.129***	-7.388***
	(0.54)	(0.18)	(0.51)	(1.44)	(1.11)	(1.25)
RealGDPgrowthrate	0.370***	0.304***	0.282***	0.39	0.730***	0.805***
	(0.10)	(0.06)	(0.08)	(0.27)	(0.22)	(0.23)
Intercept	-0.06	17.921***	15.857***	-11.81	15.475**	5.31
	(4.30)	(1.42)	(3.43)	(12.42)	(7.42)	(7.63)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	5715	10722	10145	5715	10722	10145
Adjusted_R^2	0.16	0.14	0.17	0.1	0.09	0.12

Table 4-7: Firm performance and family ties – Threshold 10%

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1–3, and Return on Equity (ROE) in columns 4-6. The cut-off level of ownership is 10%. Family firm is defined as a firm in which the largest shareholder who holds at least 10% of ownership is a family or individual. The main interest explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is family firms with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with strong family ties, and 0 if a firm is firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with weak family ties, and 0 if a firm is firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ROA			Dependent variable: ROE		
	(1)	(2)	(3)	(4)	(5)	(6)
STFFvsWTFF	4.298***			9.800***		
	(0.68)			(1.91)		
STFFvsNFF		0.481*			2.642***	
		(0.25)			(0.73)	
WTFFvsNFF			-3.047***			-4.812***
			(0.52)			(1.38)
SIZE	0.859***	0.492***	0.605***	3.810***	1.997***	2.943***
	(0.24)	(0.09)	(0.21)	(0.67)	(0.23)	(0.46)
LEV	-0.132***	-0.175***	-0.164***	-0.01	-0.04	-0.076*
	(0.02)	(0.01)	(0.02)	(0.05)	(0.03)	(0.05)
R&D	-0.18	-0.143**	-0.18	-1.076***	-0.974***	-1.076***
	(0.22)	(0.06)	(0.13)	(0.32)	(0.13)	(0.22)
RISK	-0.147***	-0.152***	-0.133***	-0.07	-0.187***	-0.08
	(0.02)	(0.01)	(0.03)	(0.08)	(0.04)	(0.07)
AGE	-0.38	-1.257***	-1.477***	-0.24	-1.028**	-2.004**
	(0.45)	(0.16)	(0.37)	(1.18)	(0.45)	(0.86)
Legal_origin	-0.26	-1.121***	-1.02	-2.97	-2.254***	0.28
	(0.71)	(0.24)	(0.78)	(1.87)	(0.66)	(1.76)
Anti_Director_Index	-1.826***	-2.242***	-1.599***	-4.783***	-5.893***	-7.637***
	(0.50)	(0.19)	(0.53)	(1.35)	(0.55)	(1.30)
RealGDPgrowthrate	0.377***	0.291***	0.284***	0.35	0.797***	0.798***
	(0.09)	(0.07)	(0.09)	(0.25)	(0.19)	(0.24)
Intercept	1.79	16.346***	16.806***	-21.351*	14.688***	11.53
	(3.98)	(1.71)	(3.53)	(11.50)	(4.60)	(7.69)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	6680	9830	9598	6680	9830	9598
Adjusted R²	0.15	0.15	0.18	0.11	0.08	0.12

Table 4-8: Firm performance and family ties after financial crisis

This table reports result of ordinary least square (OLS) regressions for a sample of 7,716 non-financial East Asian firms after financial crisis (from the period 2010 to 2017). The dependent variable is Return on Assets (ROA) in columns 1–3, and Return On Equity (ROE) in columns 4–6. The cut-off level of ownership is 20%. A family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main interest explanatory variables are: (1) *STFFWvsTFF*, a dummy variable that equals 1 if a firm is family firms with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with strong family ties, and 0 if a firm is firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with weak family ties, and 0 if a firm is firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ROA			Dependent variable: ROE		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	(1)	(2)	(3)	(4)	(5)	(6)
STFFvsWTFF	3.686***			10.437***		
	(0.82)			(2.67)		
STFFvsNFF		0.995***			3.075***	
		(0.34)			(0.97)	
WTFFvsNFF			-2.291***			-4.941***
			(0.63)			(0.95)
SIZE	0.778**	0.358***	0.515**	2.996***	1.888***	2.553***
	(0.30)	(0.10)	(0.22)	(0.81)	(0.26)	(0.27)
LEV	-0.158***	-0.212***	-0.182***	-0.07	-0.097***	-0.089**
	(0.02)	(0.01)	(0.02)	(0.07)	(0.04)	(0.04)
R&D	-0.41	-0.239***	-0.19	-0.733*	-0.953***	-0.764***
	(0.38)	(0.07)	(0.16)	(0.43)	(0.17)	(0.19)
RISK	-0.246***	-0.285***	-0.253***	(0.21)	-0.401***	-0.248***
	(0.05)	(0.02)	(0.05)	(0.14)	(0.06)	(0.07)
AGE	-0.41	-0.679***	-1.050**	-0.35	-0.48	-1.977***
	(0.62)	(0.22)	(0.44)	(1.87)	(0.60)	(0.58)
Legal_origin	-1.720*	-1.756***	-0.87	-3.74	-2.684***	-0.01
	(0.92)	(0.31)	(0.91)	(2.68)	(0.85)	(1.00)
Anti_Director_Index	-1.359**	-1.752***	-1.290**	-3.451**	-3.919***	-4.601***
	(0.61)	(0.23)	(0.59)	(1.74)	(0.66)	(0.74)
RealGDPgrowthrate	0.327**	0.364***	0.362***	0.32	0.901***	0.962***
	(0.13)	(0.08)	(0.11)	(0.38)	(0.21)	(0.23)
Intercept	6.93	19.859***	14.646***	-7.15	15.607***	4.32
	(5.41)	(1.82)	(4.14)	(15.28)	(4.70)	(5.27)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	2933	5571	5306	2933	5571	5306
Adjusted_R²	0.19	0.19	0.18	0.10	0.10	0.11

Table 4-9: Firm performance and family ties – SEM method

This table reports results of structural equation modeling (SEM) regressions. The dependent variable is Return on Assets (ROA) in columns 1–3, and Return on Equity (ROE) in columns 4–6. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main interest explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is family firms with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with strong family ties, and 0 if a firm is firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with weak family ties, and 0 if a firm is firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ROA			Dependent variable: ROE		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
	(1)	(2)	(3)	(4)	(5)	(6)
STFFvsWTFF	4.240***			9.474***		
	(0.32)			(0.98)		
STFFvsNFF		0.954***			3.883***	
		(0.25)			(0.72)	
WTFFvsNFF			-2.445***			-4.073***
			(0.23)			(0.70)
SIZE	0.904***	0.411***	0.526***	3.487***	2.117***	2.865***
	(0.12)	(0.08)	(0.08)	(0.39)	(0.22)	(0.22)
LEV	-0.138***	-0.171***	-0.158***	-0.03	-0.04	-0.060**
	(0.01)	(0.01)	(0.01)	(0.04)	(0.03)	(0.03)
R&D	-0.22	-0.129**	-0.153***	-0.950**	-1.070***	-1.048***
	(0.15)	(0.06)	(0.06)	(0.48)	(0.12)	(0.14)
RISK	-0.149***	-0.154***	-0.132***	-0.114**	-0.166***	-0.069*
	(0.02)	(0.01)	(0.01)	(0.05)	(0.03)	(0.04)
AGE	-0.440**	-1.291***	-1.418***	-0.49	-1.207***	-1.929***
	(0.22)	(0.16)	(0.15)	(0.65)	(0.42)	(0.41)
Legal_origin	-0.39	-1.020***	-1.113***	-3.518***	-2.114***	0.24
	(0.33)	(0.23)	(0.29)	(0.99)	(0.63)	(0.72)
Anti_Director_Index	-1.835***	-2.102***	-1.493***	-4.897***	-6.129***	-7.388***
	(0.22)	(0.18)	(0.20)	(0.68)	(0.52)	(0.55)
RealGDPgrowthrate	0.370***	0.304***	0.282***	0.394*	0.730***	0.805***
	(0.08)	(0.06)	(0.07)	(0.24)	(0.18)	(0.18)
Intercept	-3.47	14.414***	12.950***	-23.152***	8.077**	1.98
	(2.35)	(1.48)	(1.38)	(7.19)	(3.95)	(3.72)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	5715	10722	10145	5715	10722	10145
Adjusted_R^2	0.15	0.14	0.16	0.10	0.08	0.11

Table 4-10: Firm performance and family ties – Additional control variable

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1–3, and Return on Equity (ROE) in columns 4-6. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20%% of ownership is a family or individual. The main interest explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is family firms with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with strong family ties, and 0 if a firm is firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with weak family ties, and 0 if a firm is firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ROA			Dependent variable: ROE		
	(1)	(2)	(3)	(4)	(5)	(6)
STFFvsWTFF	4.642***			9.366***		
	(0.75)			(1.99)		
STFFvsNFF		1.342**			4.215**	
		(0.68)			(1.66)	
WTFFvsNFF			-2.549***			-4.164***
			(0.54)			(1.41)
SIZE	0.947***	0.434**	0.548***	3.476***	2.137***	2.885***
	(0.25)	(0.20)	(0.20)	(0.68)	(0.42)	(0.45)
LEV	-0.141***	-0.173***	-0.158***	-0.03	-0.05	-0.06
	(0.02)	(0.02)	(0.02)	(0.05)	(0.04)	(0.04)
R&D	-0.18	-0.11	-0.14	-0.959**	-1.055***	-1.037***
	(0.32)	(0.13)	(0.13)	(0.37)	(0.25)	(0.22)
RISK	-0.158***	-0.168***	-0.145***	(0.11)	-0.178***	(0.08)
	(0.03)	(0.02)	(0.03)	(0.07)	(0.06)	(0.07)
AGE	-0.56	-1.357***	-1.552***	-0.45	-1.26	-2.045**
	(0.49)	(0.40)	(0.37)	(1.31)	(0.96)	(0.85)
Legal_origin	-0.69	-1.137*	-0.91	-3.44	-2.21	0.42
	(0.82)	(0.59)	(0.77)	(2.39)	(1.46)	(1.75)
Anti_Director_Index	-1.451***	-1.593***	-1.758***	-5.000***	-5.694***	-7.618***
	(0.53)	(0.47)	(0.56)	(1.57)	(1.19)	(1.34)
RealGDPgrowthrate	0.410***	0.372***	0.317***	0.38	0.788***	0.835***
	(0.10)	(0.08)	(0.08)	(0.27)	(0.22)	(0.22)
TrustinPeople	4.37	6.299***	5.829*	-1.17	5.38	5.08
	(2.69)	(2.24)	(3.08)	(8.19)	(5.70)	(7.18)
Intercept	-2.15	15.638***	16.012***	-11.25	13.526*	5.45
	(4.06)	(3.51)	(3.46)	(11.63)	(7.36)	(7.65)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	5,715	10,722	10,145	5,715	10,722	10,145
Adjusted_R^2	0.16	0.15	0.17	0.10	0.09	0.12

Table 4-11: Firm performance and family ties index

This table reports results of ordinary least square (OLS) regressions. The dependent variable is Return on Assets (ROA) in columns 1, and Return on Equity (ROE) in columns 2. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main interest explanatory variable is family ties index (*FamilyTies_Index*), a principal component analysis to summarize these four variables into a single index. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ROA	**Dependent variable: ROE**
	(1)	(2)
FamilyTies_Index	4.165***	11.540***
	(0.955)	(2.402)
SIZE	0.486***	2.622***
	(0.178)	(0.404)
LEV	-0.163***	-0.055
	(0.014)	(0.038)
R&D	(0.103)	-1.083***
	(0.117)	(0.216)
RISK	-0.151***	-0.125**
	(0.021)	(0.052)
AGE	-1.082***	(1.157)
	(0.341)	(0.828)
Legal_origin	-1.785***	-5.430***
	(0.411)	(0.982)
Anti_Director_Index	0.275***	0.644***
	(0.070)	(0.194)
RealGDPgrowthrate	-0.814	-1.718
	(0.559)	(1.366)
Intercept	15.162***	5.542
	(3.147)	(7.038)
Industry fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Obs.	12,791	12,791
Adjusted_R^2	0.150	0.100

Table 4-12: Firm performance and family ties – PSM method

This table reports results of propensity score matching (PSM). The dependent variable is Return on Assets (ROA) in columns 1–3, and Return on Equity (ROE) in columns 4-6. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main interest explanatory variables are: (1) *STFFvsWTFF*, a dummy variable that equals 1 if a firm is family firms with strong family ties, and 0 if a firm is a family firm with weak family ties; (2) *STFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with strong family ties, and 0 if a firm is firm; (3) *WTFFvsNFF*, a dummy variable that equals 1 if a firm is family firm with weak family ties, and 0 if a firm is firm. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Dependent variable: ROA			Dependent variable: ROE		
	(1)	(2)	(3)	(4)	(5)	(6)
STFFvsWTFF	4.062***			9.316***		
	(0.32)			(1.01)		
STFFvsNFF		2.940***			4.56	
		(1.11)			(3.53)	
WTFFvsNFF			-2.338***			-3.652*
			(0.67)			(2.04)
SIZE	0.828***	0.602***	1.365***	3.508***	2.318***	5.045***
	(0.11)	(0.15)	(0.13)	(0.35)	(0.47)	(0.41)
LEV	-0.141***	-0.155***	-0.111***	-0.03	-0.01	-0.090**
	(0.01)	(0.01)	(0.01)	(0.04)	(0.04)	(0.04)
R&D	-0.236**	1.430***	-0.11	-0.952***	-0.13	-0.739***
	(0.11)	(0.49)	(0.09)	(0.35)	(1.57)	(0.28)
RISK	-0.138***	-0.159***	-0.118***	-0.110**	-0.238***	0.116*
	(0.01)	(0.02)	(0.02)	(0.05)	(0.06)	(0.06)
AGE	-0.32	-0.24	-0.753***	-0.54	1.54	-1.09
	(0.23)	(0.33)	(0.25)	(0.71)	(1.04)	(0.77)
Legal_origin	-1.346***	-0.40	1.286*	-4.563***	-3.446**	5.540**
	(0.35)	(0.45)	(0.72)	(1.12)	(1.42)	(2.18)
Anti_Director_Index	-1.395***	-2.502***	-1.493***	-4.343***	-5.611***	-7.780***
	(0.23)	(0.29)	(0.42)	(0.72)	(0.92)	(1.29)
RealGDPgrowthrate	0.376***	0.507***	0.233*	0.541**	0.11	0.35
	(0.08)	(0.14)	(0.12)	(0.26)	(0.45)	(0.37)
Intercept	6.44	8.145***	0.22	-11.06	3.48	-33.17
	(7.27)	(3.07)	(7.09)	(23.03)	(9.79)	(21.59)
Industry fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Obs.	5078	3274	2891	5078	3274	2891
Adjusted_R^2	0.16	0.14	0.20	0.11	0.06	0.16

Table 4-13: Firm performance and family ties – IV method

This table reports results of the first stage of instrumental variable two-stage least square (IV 2SLS) in column 1 and the second stage in columns 2 and 3. The dependent variable is Return on Assets (ROA) in columns 2, and Return on Equity (ROE) in columns 3. The cut-off level of ownership is 20%. Family firm is defined as a firm in which the largest shareholder who holds at least 20% of ownership is a family or individual. The main interest explanatory variable is family ties index (*FamilyTies_Index*), a principal component analysis to summarize these four variables into a single index. Other variables are described in Appendix. Dummy variables for industry fixed effect and year fixed effect are included in the models but not reported. Robust standard errors adjusted for clustering by the firm are reported in parentheses. ***, **, * denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	First – stage IV	Second – stage IV	
	Dependent variable: *FamilyTies_Index*	Dependent variable: ROA	Dependent variable: ROE
	(1)	(2)	(3)
FamilyTies_Index		11.473***	24.372***
		(1.825)	(4.377)
Religion	0.298***		
	(0.021)		
SIZE	-0.010**	0.733***	3.056***
	(0.005)	(0.190)	(0.420)
LEV	0.001***	-0.177***	-0.081**
	0.000	(0.015)	(0.040)
R&D	-0.009***	(0.025)	-0.945***
	(0.002)	(0.118)	(0.224)
RISK	0.001*	-0.148***	-0.120**
	0.000	(0.022)	(0.054)
AGE	-0.012	-0.651*	-0.400
	(0.011)	(0.356)	(0.846)
Legal_origin	0.008***	0.131*	0.393**
	(0.001)	(0.071)	(0.192)
Anti_Director_Index	-0.086***	-0.106	-0.474
	(0.015)	(0.585)	(1.431)
RealGDPgrowthrate	-0.039***	-1.536***	-4.994***
	(0.014)	(0.416)	(0.983)
Intercept	0.137	5.656	-12.343
	(0.093)	(3.471)	(7.632)
Industry fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Obs.	12,938	12,797	12,791
Adj.R2	0.430	0.130	0.090
Durbin-Wu-Hausman (DWH)(p_value)	0.000		
Cragg-Donald	4,925.91		

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GENERAL CONCLUSION

In this thesis, we explore the influence of family involvement in business in several aspects. First, we study how family firms borrow differently from nonfamily firms in the first paper, entitled **"The impact of family ownership status on firm leverage. Empirical evidence from East Asia"**. Financing decision is one of the most important decisions that contribute to the success of a firm. By studying 872 largest publicly traded firms in East Asian countries including Hong Kong, South Korea, Taiwan, Indonesia, Malaysia, Philippines, Singapore, and Thailand, we find that family firms have a higher level of leverage ratio than nonfamily firms during the period of 2000 to 2017. The results can be explained by the fact that family firms rely more on debt because of the dilution entrenchment, as debt is an effective tool to raise capital without ownership dilution. The findings support the argument that family companies are driven by the motivation of control power. The positive impact of family firms on leverage is found to be stronger in environments where creditor rights' protection is weak. It shows that family firms are more prone to use debt when the risk of borrowing is lower in such environments. We also show that the informal institution moderates the relationship between family firms and leverage. In particular, family firms in more religious societies are more prone to use debt. In other words, the positive relationship between family involvement and leverage is even stronger in society where religion is more influent. This indicates that family firms, typically risk averse of losing socioemotional wealth, are likely to be more concerned with socioemotional wealth in more religious environments. This study enriches family business literature by adding new evidence on East Asian family firms, where family firms are not only an extensive but also a durable organizational form. This study is also important because it investigates the impact of family

ownership on firm financing decisions in a more comprehensive institutional setting, considering both formal and informal institutions. In addition, studying the impact of family ownership on capital structure in East Asia, contributes to a better understanding of capital structure determinants of East Asian firms.

In the second essay, entitled **"Family firms and the cost of borrowing. Empirical evidence from East Asia"**, we investigate the impact of family firm on the cost of debt in East Asia during the period 2000-2017. Given that firms' behaviors are influenced by environment, especially in East Asia where informal institutions play an important role, while formal institutions are still under development, we consider both formal and informal institutions in investigating the impact of family firms on the cost of debt financing. We find consistent evidence that family firms pay a significant higher loan spread. In addition, we find that family firms are more likely to have covenants attached and pledge collateral. Our findings support the argument that family firms in East Asia borrow more relative to nonfamily firms to enhance control power and not due to a favorable cost of borrowing or non-pricing loan terms. In other words, we show that family firms are willing to protect socioemotional wealth even at the expense of financial outcomes. Furthermore, we find that stronger creditor protection helps reduce the cost of debt, while religions have a divergent impact on the cost of debt. Our study contributes to family business literature by studying the influence of family control from the perspective of creditors, given the fact that the extended literature has primarily focused on the effects of family control on firms from the perspective of shareholders. This is important because financial institutions provide most of the external financing in most economies around the world. This is even more important in East Asia where banks play an important role in Asia's financial

systems and Asian banks have been emerging lenders to the region in addition to lenders from the United Kingdom, the United States, and the European Union.

In the third paper, entitled **"Family Ties and Firm Performance. Empirical Evidence from East Asia"**, we investigate the impact of family involvement, more especially how family ties affect firm performances. We study 872 of the largest publicly traded firms in eight East Asian countries, including South Korea, Taiwan, Indonesia, Malaysia, Singapore, the Philippines, Thailand, and Hong Kong, from 2000 to 2017. We find that not all family firms have inferior performance relative to firms. More importantly, we find that family ties are important factors determining firm performance. Family firms with strong family ties exhibit superior performance relative to nonfamily firms, while family firms with weak family ties generate inferior performance compared to nonfamily firms. The results suggest that only family firms with strong familial relationships can generate a better performance over firms. Our article contributes to the family business and finance literature in several ways. First, it enriches the literature on family business by investigating the unique feature of family, that is, family ties. Previous empirical studies typically distinguish family firms from nonfamily firms, but do not capture the heteroskedasticity of the family firms. By studying family ties, we distinguish family firms with strong family ties from family firms with weak family ties. In addition, by focusing on the distinct factor of family that is not available to nonfamily firms, we isolate the net impact of family from managerial ownership or concentrated ownership. To our knowledge, this is the first study to investigate the impact of family ties on firm performance. Second, this paper contributes to the growing area of finance literature which argues that culture plays an important role in financial outcomes. By studying one of the most basic institutions in society, family ties, we add a new dimension to the relationship between culture and financial outcomes.

The first limitation refers to the scope of the studies, which is limited to East Asian countries. Furthermore, even if we include many firm-level and country-level specific factors in the models and implement a range of robustness tests, there may be other factors at work. For example, we do not cover the different level of ownership founding family hold or the family structure of founding families. Furthermore, the motivation and opportunistic behaviors of the family ownership structure are moderated by informal institutions, particularly in Asian cultures, which are very divergent. While not all of these factors, or changes in these factors, are sources of exogenous variation, further investigations into the impact of these features on family firms are important for a better understanding of family business.

The second limitation refers to the identification of a family firm. Unfortunately, the definition of a family firm has not reached a consensus. Acknowledging that results may differ according to family firm classification, we propose robustness tests which classify family firms based on family ownership. Even following one of the most common approaches, which is based on ownership, other types of family business have not been covered. Particularly, family firms owned by next generations through trustee have significant differences in governance mechanism as well objectives.

An important pathway of long-term family business development is the succession transition process, which is likely to have a considerable impact on family business and may temporarily take family business out of long-term objectives. Prior research shows that the trans-generational control intention may benefit or hurt family business, which depends much on personality, familiness and cultural context. More importantly, the process may silently occur before everything in under light.

Notwithstanding these limitations, the studies in this thesis provide important insights into the impact of family ownership on family business. They also provide useful cross-country evidence of family influence in different formal and informal institutional settings and, thus, are of potential interest to investors and stakeholders who deal or potentially deal with family firms, the most dominant organizational form of business in East Asia.