

Family Ownership Structures and Corporate Policies: The Case of Family Trusts

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December 2016

Abstract

Ownership structure plays critical roles in incentives and behaviors within business organizations. The literature has focused on the effects of firm ownership dispersion across managers and investors. We extend the literature by examining the roles of ownership structure within a controlling family. Specifically, we focus on a family trust structure that is a popular vehicle for holding family ownership around the world. The trust structure typically locks controlling ownership within a family for a very long period. Although ensuring family control, the share transfer restriction potentially induces family shirking problems, makes family conflict difficult to resolve, and distorts firm decisions. Based on a sample of publicly traded family firms in Hong Kong, we report that trust controlled firms tend to pay higher dividends, invest less on the long term, and experience worse performance during difficult times, compared with firms owned directly by family members. By contrast, families considering internal conflict potential when choosing their ownership structures do not suffer from such distortions.

Key words: family trust, ownership concentration, firm policies and performance

The authors gratefully acknowledge the financial support from the General Research Fund provided by Research Grants Council, Hong Kong.

1. Introduction

Since the seminal work of Jensen and Meckling (1976), researchers have focused on the roles of firm ownership structure in managerial incentives and corporate governance. Earlier research emphasizes conflicts of interests when diffused owners delegate firm decisions to professional managers (Demsetz and Lehn, 1985; Morck, Shleifer and Vishny, 1988). Subsequent research addresses conflicts between controlling owners and minority shareholders in the context of concentrated ownership (La Porter et al., 2002; Claessens et al., 2002). More recent research pay attention to firms controlled by founding families and explore their behavioral and performance differences from non-family firms (Anderson and Reeb, 2003a; Bennedsen et al., 2007; Villalonga and Amit, 2006).

Indeed, family firms are prevalent organizations around the world. Their strengths and weaknesses are important topics attracting contemporary research.¹ In this paper we study the roles of founding families, how their ownership structures and incentive alignment influence firm decisions and outcomes. We take a stab into the topic by examining the structure of a family controlling ownership block. Specifically, we compare cases when family ownership stakes are held in trusts against those with family shares held by individual family members. Trusts are legal

¹ Family firms, a prevalent organizational form, are often associated with highly concentrated ownership. La Porta et al. (1999) show that 100% of the 20 largest publicly traded firms in Mexico have at least a 20% family stake; this fraction is 65% for Argentina, 50% for Belgium, Greece and Israel, 45% for Portugal and Sweden. Joh (2003) reports that the largest individual and family shareholders of firms in Korea own 45.19% of shares on average. Wiwattanakantang (2001) finds that 67.78% of their sample firms in Thailand are controlled by families and that the largest shareholder has an average stake of 43.31%. The ownership concentration is often not random. For example, in firms, industries or countries where there is high agency conflict between owners and managers, ownership concentration mitigates this conflict through incentive alignment and improved monitoring by the significant owner (Shleifer and Vishny, 1997; La Porta et al., 1999). Ownership concentration allows owners to enjoy control benefits such as prestige and amenity utilities (Demsetz, 1983; Demsetz and Lehn, 1985). If a founder has strong desire to tie other family members, current or future, to the firms, he may turn the business into a family legacy through concentrating ownership (Betrand and Schoar, 2006). There also exists competitive advantage in family-controlled firms as family owners have longer horizons relative to other investors (Villalonga and Amit, 2010). Ownership concentration is the root of controlling power and source of incentives.

institutions for holding assets including firm ownership stakes. Typically in an inheritance situation, a founder can decide to transfer his firm controlling stakes to a family trust, instead of distributing the ownership shares to family members. He can name his family members (usually his spouse and descendants) as beneficiaries enjoying the cash flow rights of the entrusted shares, while appointing a trustee to manage the trust assets. Many firms around the world are controlled by family trusts or foundations, New York Times, Wal-Mart, IKEA, just to name a few.

A key difference between the trust and direct family ownership structures is ownership transferability, with the former much less transferable than the latter. Although family beneficiaries are entitled to the cash flow rights of the entrusted ownership, they are not entitled to the right to sell the ownership before the trust's dissolving date which can be many years ahead. Hence the family members have closed communal like ownership. On the other hand, in direct ownership, the family shares are private property of individual family members, and therefore are more transferrable among family members and even to outsiders as stipulated in the family's shareholder agreement.

The different share transferability between trust and direct family ownership may result in incentive and behavioral differences of family members. Property rights scholars have long pointed out that sharing resources in a common pool can induce free-rider problems (Alchian, 1965; Demsetz, 1964, 1967). Family beneficiaries may prefer to receive high dividends rather than investment for the long term. In addition, as family size increases through marriages and having children, family interests diverge, family conflict potential increases, and it becomes more difficult for the family to form consensus and make decisions.. Moreover, the lack of exiting channel due to the ownership transfer restriction in a trust structure may further cripple conflict resolution, distort firm decisions and destroy firm value, as the following case illustrates.

Sun Hung Kai Properties (SHKP) is a major property developer in Hong Kong and a leader in the real estate industry. Its founder, Kwok Tak-Seng, transferred the controlling interest of the company into a family trust as part of his succession plan. The trust was set up as being perpetual – i.e. neither the trust nor its underlying assets can be dissolved. In the trust deed, Kwok Tak-Seng named his wife and three sons as the beneficiaries. The trust appointed the three sons to co-manage the family business. Unfortunately, the brothers were not able to stay in harmony after Kwok died. There is no exit from the family ownership structure because the ownership is locked up in the perpetual trust. Therefore, the trust actually prolongs the family infighting and the corporate value of the business has been eroded in the process.

However, founding families may rationally consider their conflict potential in their ownership structure decisions. Families subject to small conflict potential are more likely to adopt a trust structure to hold family shares. Conversely, some families anticipating substantial conflict potential may decide to distribute shares to family members directly, instead of adopting a family trust structure, because ex post family conflicts may be ultimately resolved through family share buyback. Moreover, even if a family trust is established to hold controlling ownership, the founder (settlor) of the trust may include prevention clauses to mitigate effects of conflicts. All else equal, the behavioral and performance differences between trust controlled and direct family controlled firms may not be as significant as stated.

To address these issues that are relevant not only in theory but also in practice, we perform empirical tests using hand collected data of 216 public traded family firms in Hong Kong. Hong Kong is an ideal setting for our empirical tests for three reasons. First, family firms are dominant business institutions in Hong Kong, accounting for almost 70% of public traded companies (Claessens, Djankov, and Lang, 2000). Second, as a city governed by the common law, family

trust is a popular ownership vehicle in Hong Kong. One-third of our sample use family trust to contain the controlling block of family ownership and the other two-thirds have their family shares directly held by individual family members. Third, there have been numerous conflicts involving business families in Hong Kong. The significance of both trust and direct ownership structures and family conflict potential provide a suitable setting for us to test the theory of ownership structure in the tradition of Demsetz (1964, 1967), Alchian (1965), Demsetz and Lehn (1985), Shleifer and Vishny (1986), Morck, Shleifer, and Vishny (1988), Karpoff and Rice (1989), and many others.

Our results show that firms owned by large and complex controlling families tend to have lower corporate investment and higher dividend payout when family trust is adopted for holding family ownership. We do not find that performances of the trust controlled firms are worse than those firms directly owned by founding family members in general. However, such performance differences exist during critical periods such as financial crisis and family succession when decision efficiency and family harmony are critical. Furthermore, we use a two-stage instrumental variable regression approach to account for the possibility that some families consider conflict potential in their family ownership structure decisions. We find that after endogenizing family conflict potential, the firm policy and performance differences largely disappear. This finding suggests that family conflict potential is a key factor determining the behavioral and performance effects of family trust ownership.

Different from prior studies which almost unanimously focus on conflicts between corporate insiders and outsiders, we study the impacts of intra-family ownership structure and conflicts among family members on firm behaviors and performance. The academic literature on family firms is vast and rapidly expanding (e.g. Anderson and Reeb, 2003a, 2003b; Burkart, Panunzi and Shleifer, 2003; Villalonga and Amit, 2006, 2009; Bennedsen et al., 2007;

Bunkanwanicha et al. 2013), but little attention has been devoted to find out if intra-family ownership structure matters. This paper also adds to the property rights literature. We examine the communal type of ownership in a family trust and the family agency problem associated with the suppression of ownership transferability. Despite the popularity of family trusts in common law regions, there is no empirical research discussing the mechanism and investigating the consequences of having a trust ownership structure. Our research fills in the gap.

The rest of the paper is organized as follows: Section 2 develops hypotheses. Section 3 describes the data and research methodology. Section 4 presents the empirical results. Section 5 discusses the two-stage analysis and Section 6 concludes.

2. Hypothesis Development

2.1 Family trust ownership

Family trusts are popular vehicle for holding family ownership in common law regions. For example, Villalonga and Amit (2009) show that trusts are the most commonly used institutional vehicles in their sample of Fortune500 family firms.² Family trust is usually established by the founder of a family business for the benefit of his descendants in the current and future generations. There are three parties involved – the settlor, the trustee and the beneficiaries. Figure 1 in the appendix depicts the relationship among them. The settlor is the founder who establishes the trust. He transfers his firm ownership to the trust and set out the terms and conditions (e.g. income distribution rule) in the trust deed. The settlor appoints a trustee, usually a family member or a financial institution, whose principal duty is to protect the trust property and distribute income. The beneficiaries are typically the family descendants who can share the trust

² Among their 210 founder- or family-controlled sample firms, 139 of them (66%) controlled at least partially via trusts.

income according to the distribution rule as determined by the founder. Upon transfer of the family shares to the trust, the founder loses the legal ownership title of those shares. The trustee, but not the family descendants, becomes the legal owner. The decision (voting) rights of the entrusted ownership is transferred to the trustee or a committee usually composed of the descendants. Therefore the descendants can continue to control the family business (i.e. exercise the voting rights of those family shares) but they do not have the rights to sell the ownership.

A general reason of the popularity of concentrating ownership in a family trust is asset protection: protecting family assets from undesirable events such as divorce, bankruptcy, taxation, and hostile takeovers. If family shares are directly owned by individual family members, then any of the above events will risk the family losing control of its business. Moreover, family shareholders may have various other reasons to voluntarily sell their ownership, even to outsiders. This risk of share diffusion and firm control loss becomes higher over time as the family size grows and numerous family members hold transferrable shares. By contrast, a family trust locks family ownership within the vehicle by prohibiting transfer of the asset before a pre-determined trust dissolution date. The share transfer restriction enabled by the trust minimizes the threat of losing firm control.

A common cause of family trust establishment is a specific form of government intervention: taxation. For example, inheritance tax rates could reach as high as 40% in the United States. It means that the original family wealth will be reduced by nearly 40% after one generation and another 16% after two generations. In Hong Kong, it was not until 2006 inheritance tax was abolished. Family trusts, especially those established in overseas low tax regimes, become devices for reducing or even avoiding inheritance tax.

2.2 Ownership transferability and family conflict potential

Aside from asset protection and tax benefits, one important effect of using a family trust to hold controlling shares is that it restricts transfer of the shares. The omitted transferability can create profound incentive effects on family beneficiaries, some of them are also managers and employees of the firm. The alignment between stewardships and rewards will be weakened, and free rider problems among family beneficiaries will arise. The issue is similar to the exploitation problem of natural resources described by property rights scholars (e.g., Demsetz, 1967). When scarce resources are public or communal owned and their property rights are not properly protected, an individual's harvest imposes costs to late comers but not himself. Expecting this, hunters and spectators rush in, resulting in fast exhaustion of the resources. Likewise, family beneficiaries of a firm controlled by a family trust may behave like employees of a state-owned enterprise, preferring immediate consumption of corporate resources over investing in long-term projects, since they are unable to capitalize on the long-term gain through ownership transfers while they do not bear the full cost of the exploitation. To mitigate the incentive problem the family and company need to invest in governance mechanisms, making the trust controlled family firm a high cost organization.

Another limitation of family trust is that it is subject to challenge of future contingencies. A common contingency is change in family relationship when family size grows large so as the family's conflict potential. Conflicts could arise from either the firm or the family affairs, due to the increasing number of trust beneficiaries as they have diverse objectives and opt to compete for limited family and corporate resources. The problem of family infighting is heightened when ownership transferability is not allowed, as in the case of family trust, due to the inability of family members to exit for resolving the conflicts. Company operation will be adversely affected if family arguments are brought to the firm, leading to unfavorable corporate policies and firm performance.

In summary, family trust ownership is akin to state and communal ownership of which its transferability is suppressed. Family free-rider problem exists and this problem becomes more serious when the number of family members inside the trust is growing large. The situation is even worse in families with great conflict potential, since family trust provides no exit for resolving conflicts and consolidation of control is difficult. Therefore, unhappy families with entrusted ownership can impede corporate development and destroy firm value, as vividly illustrated in the SHKP case.

2.3 Family trust ownership and firm policies

When economic resources are scarce and owned in common, people in the community will incline to exploit those resources as much and as early as they can to maximize their personal benefits (Demsetz, 1967; Karpoff and Rice, 1989). The common pool problem potentially applies to the use of family trust. In trust ownership, the family firm's income stream is shared by family members of the present as well as future generations. Being beneficiaries of the trust, family members can share the dividends derived from the family assets. Since the family beneficiaries cannot capitalize firm investment gain by selling off firm ownership, their incentives turn short term and therefore prefer high dividend and low investment policies. Moreover, as the family size grows over time, the average cash flow right of a given family beneficiary shrinks. This further tempts family beneficiaries to become near term focused.

It is conceivable that family members can negotiate and reach an agreement or adopt monitoring mechanisms to limit potential exploitation of resources in the family firm. However, the negotiation and monitoring costs can be substantial, and increasingly so when family size and associated conflict potential grows large. When conflict potential is high, it is likely that family members will be motivated to maximize the benefits of their own branch instead of the family as

a whole. Therefore, we have the following hypothesis.

Hypothesis (1):

When family conflict potential is high, family firms adopting family trust ownership tend to have higher dividend payout and lower corporate investment than those using direct ownership.

It is harder to predict any performance effect of trust ownership. If families rationally choose their ownership structure, we may not find family trust associated with firm value. For example, families will adopt family trust ownership when their firms operate in stable growth industries where capital investment is less important than distributing profits. However, we may observe a link between family trust and firm value in extreme scenarios. For example, when the family business is under keen financial pressure in a financial crisis or when there is a change in management control during leadership succession, the effects of family conflicts on decision efficiency are likely magnified and their negative impacts on firm performance become significant. Therefore, we have the following hypothesis.

Hypothesis (2):

During critical periods such as a financial crisis and leadership succession, firms controlled by family trust tend to have worse firm performance than those owned directly by family members, particularly so when family conflict potential is high.

2.4 Alternative hypotheses

Up to now we have assumed that founding families' ownership structure choice is exogenous to conflict potential. This may be true when families choose the trust ownership structure primarily for other purposes such as tax avoidance and asset protection. However, some

families may indeed consider their future conflict potential in their family ownership decisions. Moreover, some families may engage family governance mechanisms to facilitate decision making and mitigate family conflicts.³ Also, foreseeing potential conflicts, founders of family trusts may include prevention clauses to deter the expropriation problems.

Unfortunately we do not have information about the types and extents of governance mechanisms in place in these families, nor do we have access to original trust documents to verify whether the protection clauses exist. However, if some family firm founders incorporate the family conflict factors in their ownership choices, the effects of the ownership decisions on firm dividend and investment policies as well as firm performance would be much less significant (Demsetz and Lehn, 1985). We incorporate this possibility as the alternative of the above Hypotheses (1) and (2).

Alternative Hypothesis:

For firms whose founders factor in family conflict potential in their ownership decisions, the firms' dividend and investment policies and performance are not affected by whether the controlling ownership is entrusted or directly held by family members.

3. Data and Research Methodology

3.1 Data

We study the intra-family ownership structures among firms listed on the Hong Kong Stock Exchange. They can be classified into two broad categories: family trust and direct ownership. Family trust is a popular vehicle of holding controlling ownership in Hong Kong. One-third of our sample use family trust for holding controlling ownership. The other two-thirds use direct

³ Family governance is a set of self-enforced mechanisms such as a family board to make decisions, family codes to regulate family members' behaviors, ceremony and education programs to share family values, and so on.

ownership.⁴

We begin with all publicly-traded firms in Hong Kong in year 2004 and then trace each firm backward and forward within the period 1990-2008. There are altogether 892 domestic firms listed on the exchange in year 2004. Out of these 892 firms, 72 firms with H-shares (they are China incorporated enterprises but listed in Hong Kong) are excluded. We then select our sample firms from the remaining 820 firms by two criteria: 1) total family ownership reaches 10% or higher;⁵ and 2) the firm has financial data of at least five continuous years. The above screening criteria results in a sample of 216 distinct family firms (or 2,506 firm-year observations) over the sample period.

Table 1 shows the composition of the sample. Among the 216 sample firms, 72 use family trust and 144 use direct ownership. They are mostly in the manufacturing (84 firms), finance, insurance and real estate (52 firms) and wholesale and retail trade (44 firms) sectors. We hand collect the data of founding families and ownership structures from various sources including corporate annual reports, the Hong Kong Stock Exchange website, company websites, magazines, news, etc. Financial data is drawn from the WorldScope Database. Majority of the sample firms are controlled by their first (76 firms), second (87 firms) and third generation (41 firms) founding family members. For those in their second generation or higher, they mostly have two (31 firms),

⁴ The controlling ownership of these firms is either held directly by individual family members or through a corporation owned by several family members.

⁵ Definitions of family firms vary in the literature. Villalonga and Amit (2010) provide four definitions of family firms: (1) founder- or founding family-owned: firms in which the founder or a member of the founding family by either blood or marriage is an officer, director, or blockholder either individually or as a group, (2) founding family-owned and managed: subset of firms included in (1) that are in their second or later generation and whose CEO is the founder or a family member, (3) individual- or family-controlled: firms in which an individual or family (founding or non-founding) is a blockholder, and (4) family-controlled and managed: subset of firms included in (3) that are in their second or later generation and whose CEO is an individual blockholder or a member of a blockholding company. Our definition of family firms is similar to their definition (3) above.

three (36 firms) or four (21 firms) family branches.⁶

3.2 Research Methodology

We employ the following regression model for testing hypothesis (1):

$$\begin{aligned} Firm\ Policy_{it} = & \alpha_0 + \alpha_1 Trust_{it} + \alpha_2 Conflict\ Potential_i + \alpha_3 Trust_{it} * Conflict\ Potential_i \\ & + \alpha_4 Firm\ Size_{it} + \alpha_5 ROA_{it} + \alpha_6 Capital\ Intensity_{it} + \alpha_7 Leverage_{it} \\ & + \alpha_8 Firm\ Age_{it} + \alpha_9 Family\ Ownership_{it} + \alpha_{10} Founder\ as\ Chairman_{it} + \varepsilon_{it} \end{aligned}$$

Firm Policy_{it} refers to the firm's dividend payout and corporate investment. We employ three measures for dividend payout. They are: (i) natural log of total annual cash dividends; (ii) total annual cash dividends divided by (positive) earnings before interest and tax; and (iii) total annual cash dividends divided by total sales. We use two measures for corporate investments. They are: (i) the firm's annual capital expenditures scaled by previous year-end book assets; and (ii) current year's total employees divided by last year's total employees – 1 (i.e. employees growth from last year). *Trust_{it}* is a dummy variable equals to 1 if firm *i* uses family trust in year *t* and 0 if it uses direct ownership. We apply two measures for *Conflict Potential_i*. They are: (i) total number of family branches; and (ii) total number of generations. These family structure variables indicate the complexity of family communication as well as the diversity of family interests, thus reflecting the conflict potential of the family firms by end of the sample period (i.e. year 2008). A family branch is an individual or a couple carrying the family name. For example, Li Ka-shing (founder of Cheung Kong Group) has a wife and two sons who are Li Tzar-kuoi and Li Tzar-kai. As of year 2008, Li Tzar-kuoi is married. He has three daughters and one son. Li Tzar-kai is not married but he has one son. In this case,

⁶ Definition of “family branch” is provided in section 3.2.

- Li Ka-shing and his wife (Li Chong Yuet-ming) are counted as one branch;
- Li Tzar-kuoi and his wife (Li Wong Lai-kiu) are counted as one branch;
- Li Tzar-kai is counted as one branch;
- Li Tzar-kuoi's three daughters and one son are counted as four branches;
- Li Tzar-kai's son is counted as one branch.

Hence, Li Ka-shing family has 8 branches and 3 generations in total (see Figure 2 in the appendix).

We expect conflicts are more likely when the number of family branches increases over more generations.

Our regression control variables include firm size, profitability, capital intensity, leverage, firm age, total family ownership in the firm and dummies indicating the presence of a founder-chairman. These firm characteristics are expected to be correlated with the firm's dividend payout and investment policies. For instance, profitable firms are more able to make investments and expand their businesses. Older firms tend to be more matured with less incentive of corporate expansion. The presence of founder in the leadership may play a role in the firm policies especially when there are family conflicts.

All regression models are estimated with industry fixed effect and year fixed effect. Since our key independent variables *Trust* and *Conflict Potential* exhibit very little time-series variation, we abstain from using firm fixed effects. However, we use clustered standard errors to control for intrafirm correlation.

In Hypothesis (1), we conjecture that when conflict potential is high, family firms adopting family trust tend to have higher dividend payout and lower corporate investment than those using direct ownership. Therefore, we expect the coefficient of $Trust_{it} * Conflict\ Potential_{it}$ (i.e. α_3) to be significantly positive in the regressions of dividend payout but significantly negative in the regressions of corporate investment.

We next employ the following model for testing hypothesis (2):

$$\begin{aligned}
Firm\ Value_{it} = & \beta_0 + \beta_1 Trust_{it} + \beta_2 Conflict\ Potential_i + \beta_3 Trust_{it} * Conflict\ Potential_i \\
& + \beta_4 Critical\ Period_{it} + \beta_5 Trust_{it} * Critical\ Period_{it} \\
& + \beta_6 Critical\ Period_{it} * Conflict\ Potential_i \\
& + \beta_7 Trust_{it} * Critical\ Period_{it} * Conflict\ Potential_i \\
& + \beta_8 Firm\ Size_{it} + \beta_9 Sales\ Growth_{it} + \beta_{10} Capital\ Intensity_{it} \\
& + \beta_{11} Leverage_{it} + \beta_{12} Firm\ Age_{it} + \beta_{13} Family\ Ownership_{it} \\
& + \beta_{14} Founder\ as\ Chairman_{it} + \varepsilon_{it}
\end{aligned}$$

Firm Value_{it} is measured by Tobin's Q which is the fiscal year-end market value of equity plus book value of debt divided by total assets of firm i in year t. There are two measures for *Critical Period_{it}*. They are:

(i) Leadership succession

- A dummy variable equals 1 if the observation is in the year (and the year after) during which a leadership succession occurred (i.e. year t and t+1 where t is the succession year) and 0 otherwise.
- This analysis applies to a subsample of firms which have experienced a leadership succession during the sample period.

(ii) Financial crisis

- A dummy variable equals 1 if the observation is in the year 1997 or 1998 during which the Asian Financial Crisis occurred and 0 otherwise.
- This analysis applies to a subsample of firms which have experienced the Asian Financial Crisis during 1997 and 1998.

Other variables are defined earlier.

In Hypothesis (2), we conjecture that during financial crisis and leadership succession, firms controlled by family trust tend to have worse firm performance than those owned directly by family members, especially when conflict potential is high. Therefore, we expect the coefficient of $Trust_{it} * Critical\ Period_{it} * Conflict\ Potential_{it}$ (i.e. β_7) to be significantly negative.

4. Empirical Results

4.1 Descriptive Statistics

Variable definitions can be found in the appendix. Table 2 Panel A reports the summary statistics of the variables and Panel B reports the mean difference of the variables between firms using family trust and firms using direct ownership. On average, our sample firms have 3.57 family branches and they are at their 1.97 generations. There's no significant difference in these conflict potential variables between the two types of firms. However, firms using family trust tend to be larger, more profitable, more leveraged, and have higher capital intensity and family ownership in the business. Ignoring the effect of conflict potential, the univariate analysis shows that firms distribute larger bulk of cash dividends and have higher amount of capital expenditures when trust ownership structure is adopted.

4.2 Multivariate Analysis

4.2.1 Family trust ownership and firm policies

Table 3 reports the results for regressions on dividend payout. Columns (1) to (3) show the results of which dividend payout is measured by the natural log of total annual cash dividends. Columns (4) to (6) and columns (7) to (9) show the results when dividend payout is measured by cash dividends scaled by EBIT and cash dividends scaled by sales respectively. In columns (1), (4) and (7), we investigate whether *Trust* alone has any effect on dividend payout. It is found that

when family trust is used, firms tend to distribute a larger (unscaled) amount of cash dividends as shown in column (1) where *Trust* is significantly positive (coefficient = 0.3659; t-stat = 2.27). We further investigate if conflict potential matters in dividend payout policies. Columns (2), (5) and (8) show the results when conflict potential is measured by number of family branches while columns (3), (6) and (9) present the results when number of generations is the conflict proxy. The coefficients of the interaction term *Trust*Conflict Potential* are all positive and statistically significant, which are consistent with our predictions.

Table 4 reports the results for regressions on corporate investments. Columns (1) to (3) show the results of which corporate investment is measured by the amount of capital expenditures. Columns (4) to (6) show the results when corporate investment is measured by employees growth. As shown in columns (1) and (4), *Trust* alone has no significant effect on corporate investments. We then investigate if conflict potential matters in investment policies. The coefficients of the interaction term *Trust*Conflict Potential* are negative and statistically significant, in both regressions when number of branches [columns (2) and (5)] and number of generations [columns (3) and (6)] are used as proxy for conflict potential.

The above results support our hypothesis (1) that firms adopting family trust tend to have higher dividend payout and lower corporate investment when conflict potential is high. This is because, in an acute environment where competition is high and relation is remote, trust beneficiaries are inclined to exploit resources from the family business for their own benefits and sustain less for future corporate development.

4.2.2 Family trust ownership and firm performance

Table 5 shows the results for hypothesis (2). We study the effect of family trust and conflict potential on firm performance during critical periods of leadership succession [columns (1) to (4)]

and financial crisis [columns (5) to (8)]. *Conflict Potential* alone has a negative effect on firm performance, particularly when there is a leadership succession. The negative coefficient of *Conflict Potential* is statistically significant in columns (1) to (4). The interactive effect of family trust and conflict potential does not have a significant impact on firm performance in general, as shown in columns (1), (3), (5) and (7). However, this interactive effect becomes significant during critical periods. The three-way interaction terms *Trust*Critical Period*Conflict Potential* are all significantly negative in columns (2), (4), (6) and (8). This indicates that during critical time of leadership succession and financial crisis, firms controlled by family trust and having high conflict potential tend to have worse firm performance. This is consistent with our conjecture that the negative impact of family disputes is magnified during critical time periods and the disputes are hard to be resolved when family members are locked inside the trust, resulting in firm inefficiency and destroy of corporate value.

5. Endogenizing Family Conflict Potential

Family trusts are typically established for asset protection purposes. However, founders may not have a perfect foresight on the consequences of adopting a family trust for controlling ownership. In particular, they may underestimate the cost of keeping family harmony (or counteracting family disputes) when the descendants are being tied up in the family business by a trust. However, if family founders have optimized this cost in their choice of using trust or direct ownership, we would not see any significant impact on corporate policies or firm performance by the chosen intra-family ownership structure. In this section, we perform a two-stage least square (2SLS) analysis to test these alternative hypotheses.

5.1 Instrumental Variable

Ideally we would like to employ an instrumental variable (IV) that is correlated with trust but not with the firm policy and performance variables. Consistent with Bennedsen et al. (2007), we explore the sibling structure of a family, in particular gender of sibling. It can be argued that a family with more sons is more likely to suffer from conflict than another family with fewer sons. If the founder considers the high conflict potential in family ownership choice, he will not adopt a family trust structure. Table 6 confirms this conjecture. In a series of probit regressions where the family trust dummy variable is regressed on proxies for family conflict potential, it is found that the effect of *Son* (number of founder's sons) on the probability of using trust is an inverted U-shape. In Table 6 column (4), the coefficient of *Son* is 0.3291 with p-value 0.0401 while the coefficient of its square term is -0.0520 with p-value 0.0388, suggesting that when the founder has many sons, the cost of resolving conflict is high and this reduces his/her tendency to put the family ownership in a trust.

In our context, unfortunately, the number of male sibling is not a suitable instrument, because male sibling are likely also managers of the firms therefore the male sibling number is likely correlated with the firm policy and performance variables. By contrast, in the context of Hong Kong Chinese family firms, female members are typically less involved in firm decision making, therefore female sibling is likely uncorrelated with firm policy and performance. However, female sibling is significantly correlated with trust. As shown in Table 6 column (3), there is a clear positive relation between *Daughter* (number of founder's daughters) and the probability of using trust. The coefficient of *Daughter* is 0.3423 with p-value 0.0826 (although the coefficient of its square term is negative, it is not statistically significant). Families that have more daughters are more likely to adopt trust ownership structure, possibly because of the control and asset protection issues discussed before. Moreover, we find that the number of daughters in a family is positively

related to the number of sons. In this sense, the daughter number is also a predictor of conflict. Given these reasons, we use the number of founder's daughters (*Daughter*) as the IV in the 2SLS analysis.

Using *Daughter* as the instrumental variable, we obtain the optimal choice of intra-family ownership structure for each family firm. This optimal choice is designated by a variable “*Predicted Trust*” which is a continuous variable between 0 and 1. When “Predicted Trust” is 0, it indicates that the family firm should pursue an outright direct ownership structure after optimizing the cost of family disputes. When “Predicted Trust” is 1, it indicates that the family firm can adopt a trust ownership structure after taking potential family conflicts into account. The values between 0 and 1 show the degree of suitability towards these two ends.

5.2 Regression Models

We solve equations (1) and (2) simultaneously to investigate if the optimal choice of intra-ownership structure has any effect on dividend payout and corporate investments.

Equation (1):

$$Predicted\ Trust_{it} = \alpha_0 + \alpha_1 Daughter_{it} + \mu_{it}$$

Equation (2):

$$\begin{aligned} Firm\ Policy_{it} = & \alpha_0 + \alpha_1 Predicted\ Trust_{it} + \alpha_2 Conflict\ Potential_i \\ & + \alpha_3 Predicted\ Trust_{it} * Conflict\ Potential_i \\ & + \alpha_4 Firm\ Size_{it} + \alpha_5 ROA_{it} + \alpha_6 Capital\ Intensity_{it} + \alpha_7 Leverage_{it} \\ & + \alpha_8 Firm\ Age_{it} + \alpha_9 Family\ Ownership_{it} + \alpha_{10} Founder\ as\ Chairman_{it} + \varepsilon_{it} \end{aligned}$$

Then we solve equations (3) and (4) simultaneously to investigate if the optimal choice of intra-ownership structure has any effect on firm performance during critical time periods.

Equation (3):

$$\text{Predicted Trust}_{it} = \alpha_0 + \alpha_1 \text{Daughter}_{it} + \mu_{it}$$

Equation (4):

$$\begin{aligned} \text{Firm Value}_{it} = & \beta_0 + \beta_1 \text{Predicted Trust}_{it} + \beta_2 \text{Conflict Potential}_i \\ & + \beta_3 \text{Predicted Trust}_{it} * \text{Conflict Potential}_i \\ & + \beta_4 \text{Critical Period}_{it} + \beta_5 \text{Predicted Trust}_{it} * \text{Critical Period}_{it} \\ & + \beta_6 \text{Critical Period}_{it} * \text{Conflict Potential}_i \\ & + \beta_7 \text{Predicted Trust}_{it} * \text{Critical Period}_{it} * \text{Conflict Potential}_i \\ & + \beta_8 \text{Firm Size}_{it} + \beta_9 \text{Sales Growth}_{it} + \beta_{10} \text{Capital Intensity}_{it} \\ & + \beta_{11} \text{Leverage}_{it} + \beta_{12} \text{Firm Age}_{it} + \beta_{13} \text{Family Ownership}_{it} \\ & + \beta_{14} \text{Founder as Chairman}_{it} + \varepsilon_{it} \end{aligned}$$

5.3 Results

Table 7 reports the 2SLS results for corporate policies. The results for dividend payout, capital expenditures and employees growth are shown in columns (1) – (2), (3) – (4) and (5) – (6) respectively. The coefficients of the interaction term *Predicted Trust*Conflict Potential* are insignificant in all regressions except in column (4) when number of generations (as a proxy of conflict potential) is regressed on capital expenditures. Table 8 shows the 2SLS results for firm performance. The coefficients of the three-way interaction term *Predicted Trust*Critical Period*Conflict Potential* are insignificant in all regressions. Overall, the results support the alternative hypotheses that if family founders optimize the cost of family conflicts in the choice of intra-family ownership, the use of family trust should have no significant impact on the firm's corporate policies and firm performance, even in situations where conflict potential is high and in time periods when family tension is stretched tight.

6. Conclusion

We have used family trusts in Hong Kong to test several behavioral effects of restricting transfer rights of firm ownership. If ownership is directly held by family members, the family members' income (dividend) and voting rights are clearly delineated. When a family member decides to exit the family business, he/she can simply sell his/her shares either back to the family or to outsiders. The ability to transfer ownership is an important mechanism of resolving disputes among family members. The selling family members can walk away with a fortune, while the active buying family members can have a more robust incentive and control over the family business. By contrast, the use of family trust suppresses the transfer rights of the family ownership and blocks this buyout channel. The trust deed typically specifies a long-period of time, or even indefinitely, before the trust can be dissolved and the ownership can be transferred.

The use of trust induces the common pool problem. Through marriages and having children, over time the controlling family will increase in size and complexity. More and more family members are added as trust beneficiaries. Foreseeing keen competition on the trust income, family members tend to extract and privatize resources out of the family firm and retain less for future business development. Our results show that firms adopting family trust have higher dividend payout, lower capital expenditures and lower employees growth, especially when family conflict potential is high.

For firms using family trust, family managers may find it hard to consolidate control to make timely critical decisions. As family owners are locked inside the trust, infightings are likely to persist and firm performance dampened because decision-making is paralyzed (Ellul, Pango and Panunzi, 2010). The effect of ownership non-transferability on firm performance is more pronounced when family tensions are heightened during critical times. In particular, when the family business is under keen financial pressure in a financial crisis and when there is a change in

management control during leadership succession, family conflicts are magnified and we find that their negative impacts on firm performance become significant.

However, we find that if founding families consider future family conflict potential in their family ownership decisions, they would not suffer from the above mentioned distortions. The evidence is consistent with the endogeneity of family ownership structure.

Our study contributes to not only the academic literature but also to business owners and practitioners contemplating the ownership structures of the firms they serve. The paper has several caveats. Because of lack of information, we are unable to examine the role of family governance in mitigating family conflict potential and hence the family trust ownership choice. Nor are we able to examine original trust deeds if they include conflict prevention clauses. These are important questions deserve further research.

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Table 1
Sample Composition

This table reports the sample composition for a sample of 216 publicly listed Hong Kong family firms during 1990-2008. Panel A reports the sample composition by industry; Panel B reports the sample composition by number of generations; Panel C reports the sample composition by number of family branches.

Panel A - By Industry

Industry Sectors	No of firms in full sample	No of firms using family trust (% of full sample)	No of firms using direct ownership (% of full sample)
Mining and Construction	4	0 (0%)	4 (100%)
Manufacturing	84	27 (32%)	57 (68%)
Transportation, Communications, Utility	8	7 (88%)	1 (12%)
Wholesale and Retail Trade	44	13 (30%)	31 (70%)
Finance, Insurance and Real Estate	52	20 (38%)	32 (62%)
Services	24	5 (21%)	19 (79%)
Total	216	72 (33%)	144 (67%)

Panel B - By Number of Generations

Current Generation	No of firms in full sample	No of firms using family trust (% of full sample)	No of firms using direct ownership (% of full sample)
1 st Generation	76	19 (25%)	57 (75%)
2 nd Generation	87	29 (33%)	58 (67%)
3 rd Generation	41	17 (41%)	24 (59%)
4 th Generation	10	7 (70%)	3 (30%)
5 th Generation	0	0 ---	0 ---
6 th Generation	2	0 (0%)	2 (100%)
Total	216	72 (33%)	144 (67%)

Panel C - By Number of Family Branches

Number of Family Branches	No of firms in full sample	No of firms using family trust (% of full sample)	No of firms using direct ownership (% of full sample)
1	76	19 (25%)	57 (75%)
2	31	8 (26%)	23 (74%)
3	36	13 (36%)	23 (64%)
4	21	7 (33%)	14 (67%)
5	9	3 (33%)	6 (67%)
6	12	5 (42%)	7 (58%)
7	2	2 (100%)	0 (0%)
8	8	6 (75%)	2 (25%)
9	10	6 (60%)	4 (40%)
>= 10	11	3 (27%)	8 (73%)
Total	216	72 (33%)	144 (67%)

Table 2
Descriptive Statistics

This table reports descriptive statistics for a sample of 216 publicly listed Hong Kong family firms during 1990-2008. Panel A reports the summary statistics of the variables. Panel B reports the mean difference of the variables between firms using family trust and firms using direct ownership. Variable definitions can be found in the appendix. All time-series variables have been winsorized at the top and bottom 1%, except Tobin's Q which has been winsorized at the top and bottom 5% as it appears to have quite many extreme values.

Panel A – Summary statistics of the variables

Cross-sectional data (at year 2008)

Variable	N	Mean	Median	SD	Min	Max
Branches	216	3.57	3	3.49	1	19
Generations	216	1.97	2	0.93	1	6
Daughter	216	0.65	0	1.19	0	7
Son	216	1.42	1	1.68	0	9

Time-series data (1990 - 2008)

Variable	N	Mean	Median	SD	Min	Max
Capital Expenditures	2390	0.05	0.03	0.06	0	0.35
Employees Growth	1591	0.09	0.02	0.45	-0.72	3.11
Cash Dividends (ln)	2493	3.00	3.18	2.26	0	8.57
Cash Dividends scaled by EBIT	2063	0.40	0.25	0.65	0	5.03
Cash Dividends scaled by Sales	2493	0.07	0.02	0.14	0	0.95
Tobin's Q	2506	1.12	0.83	0.87	0.35	3.90
Leadership Succession	446	0.19	0	0.39	0	1
Financial Crisis	1887	0.13	0	0.34	0	1
Firm Size (ln of sales)	2506	6.78	6.96	1.65	1.83	10.66
Firm Size (ln of market equity)	2506	6.85	6.56	1.88	2.69	12.12
ROA	2392	0.06	0.05	0.11	-0.40	-0.38
Capital Intensity	2399	0.49	0.47	0.29	0.01	1.15
Leverage	2506	0.18	0.15	0.15	0	0.63
Firm Age	2506	16.69	13.00	14.46	0	85
Family Ownership	2506	0.51	0.52	0.14	0.18	0.75
Founder as Chairman	2506	0.86	1	0.35	0	1

Panel B – Mean difference of the variables between firms using family trust and firms using direct ownership

Cross-sectional data (at year 2008)

Variable	Family Trust		Direct Ownership		Mean (1) – (2)	t-stat
	N	Mean	N	Mean		
		(1)		(2)		
Branches	72	3.49	144	3.60	-0.11	-0.20
Generations	72	1.96	144	1.97	-0.01	-0.04
Daughter	72	0.76	144	0.61	0.15	0.82
Son	72	1.38	144	1.43	-0.05	-0.19

Time-series data (1990 - 2008)

Variable	Family Trust		Direct Ownership		Mean Difference	
	N	Mean	N	Mean	(1) – (2)	t-stat
		(1)		(2)		
Capital Expenditures	771	0.06	1619	0.04	0.02***	4.75
Employees Growth	577	0.11	1014	0.09	0.02	0.80
Cash Dividends (ln)	803	3.57	1690	2.72	0.85***	8.87
Cash Dividends scaled by EBIT	696	0.38	1367	0.40	-0.02	-0.79
Cash Dividends scaled by Sales	803	0.07	1690	0.07	0.00	0.30
Tobin's Q	805	1.16	1701	1.11	0.05	1.28
Leadership Succession	153	0.19	293	0.19	0.00	0.05
Financial Crisis	632	0.12	1255	0.14	-0.02	-0.83
Firm Size (ln of sales)	805	7.30	1701	6.54	0.76***	11.03
Firm Size (ln of market equity)	805	7.28	1701	6.64	0.64***	8.03
ROA	772	0.06	1620	0.05	0.01**	2.50
Capital Intensity	761	0.57	1638	0.45	0.12***	9.34
Leverage	805	0.19	1701	0.17	0.02***	2.98
Firm Age	805	16.78	1701	16.65	0.13	0.21
Family Ownership	805	0.52	1701	0.51	0.01***	2.81
Founder as Chairman	805	0.80	1701	0.88	-0.08	-5.81

Table 3
Family trust and firm payout policy

This table reports the results of the use of family trust on firm's dividend payout, conditioning on conflict potential. Firm's dividend payout is measured by the natural log of cash dividends (total annual distribution), cash dividends scaled by EBIT and cash dividends scaled by sales. Conflict potential is proxy by number of branches and number of generations of the family. Variable definitions can be found in the appendix. ***, **, * indicate significance levels of 0.01, 0.05 and 0.10 respectively.

Conflict Potential =	Cash Dividends (ln)			Cash Dividends scaled by EBIT			Cash Dividends scaled by Sales		
	Branches	Generations		Branches	Generations		Branches	Generations	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
Intercept	-2.4486*** (-3.73)	-2.1096*** (-3.18)	-2.5293*** (-3.78)	0.7713*** (2.99)	0.8542** (3.29)	0.8044*** (3.22)	0.1560*** (2.78)	0.1831*** (3.21)	0.1718*** (2.59)
Trust	0.3659** (2.27)	-0.2277 (-0.88)	-0.6796** (-1.87)	0.0431 (0.88)	-0.0662 (-1.07)	-0.1478 (-1.51)	0.0128 (0.96)	-0.0296* (-1.95)	-0.0457* (-1.94)
Conflict Potential		0.0063 (0.25)	0.1572 (1.55)		-0.0028 (-0.34)	0.0119 (0.47)		-0.0029 (-1.24)	-0.0021 (-0.19)
Trust * Conflict Potential		0.1447*** (2.91)	0.4869*** (3.12)		0.0261* (1.76)	0.0876* (1.82)		0.0103** (2.51)	0.0273** (2.18)
Firm Size (ln of sales)	0.7722*** (13.68)	0.7327*** (13.19)	0.7165*** (12.87)	-0.0218 (-1.34)	-0.0291* (-1.79)	-0.0316* (-1.80)	-0.0127** (-2.43)	-0.0144*** (-2.94)	-0.0145*** (-2.99)
ROA	4.7789*** (9.33)	4.7050*** (9.33)	4.7200*** (9.44)	-0.8457** (-2.08)	-0.8878** (-2.20)	-0.8772** (-2.16)	0.2138*** (6.33)	0.2068*** (6.29)	0.2107*** (6.33)
Capital Intensity	-0.0714 (-0.28)	-0.1257 (-0.51)	-0.0905 (-0.36)	-0.2864*** (-3.03)	-0.2967*** (-3.07)	-0.2925*** (-3.02)	-0.0379 (-1.53)	-0.0410 (-1.64)	-0.0393 (-1.58)
Leverage	-2.7235*** (-5.84)	-2.8166*** (-6.22)	-2.6915*** (-6.08)	-0.8071*** (-7.06)	-0.8167*** (-7.16)	-0.7978*** (-7.11)	-0.1210*** (-4.44)	-0.1223*** (-4.41)	-0.1189*** (-4.41)
Firm Age	0.0207*** (3.46)	0.0181*** (3.25)	0.0138** (2.25)	0.0048*** (2.78)	0.0045*** (2.84)	0.0039** (2.30)	0.0018** (2.26)	0.0019** (2.31)	0.0017* (1.91)

Family Ownership	0.1749 (0.33)	0.0695 (0.13)	0.0685 (0.14)	0.2873* (1.72)	0.2749* (1.69)	0.2753* (1.72)	0.0309 (0.60)	0.0308 (0.61)	0.0316 (0.66)
Founder as Chairman	0.1949 (0.84)	0.2599 (1.14)	0.3360 (1.52)	-0.0652 (-0.64)	-0.0564 (-0.55)	-0.0430 (-0.42)	0.0047 (0.21)	0.0070 (0.30)	0.0104 (0.43)
Industry Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES	YES
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES	YES
Clustering by Firms	YES	YES	YES	YES	YES	YES	YES	YES	YES
R-square	0.5586	0.5703	0.5756	0.0857	0.0896	0.0906	0.2372	0.2489	0.2441
No of Observations	2282	2282	2282	1903	1903	1903	2282	2282	2282

Table 4
Family trust and firm investment policy

This table reports the results of the use of family trust on firm's investment policy, conditioning on conflict potential. Firm's investment policy is measured by the firm's annual capital expenditures scaled by previous year end book assets and the growth in number of employees. Conflict potential is proxy by number of branches and number of generations of the family. Variable definitions can be found in the appendix. ***, **, * indicate significance levels of 0.01, 0.05 and 0.10 respectively.

Conflict Potential =	Capital Expenditures			Employees Growth		
	Branches	Generations		Branches	Generations	
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	4.3700 (1.62)	3.5953 (1.29)	3.9577 (1.41)	-0.1123 (-1.07)	-0.1198 (-1.11)	-0.1039 (-0.89)
Trust	0.2911 (0.58)	1.6452* (1.87)	3.1692** (2.30)	0.0069 (0.29)	0.0442 (1.31)	0.0938* (1.74)
Conflict Potential		0.0070 (0.08)	-0.0764 (-0.18)		-0.0045 (-1.42)	-0.0069 (-0.43)
Trust * Conflict Potential		-0.3307** (-2.14)	-1.3439** (-2.29)		-0.0092* (-1.70)	-0.0407* (-1.74)
Firm Size (ln of market equity)	0.1214 (0.98)	0.1967 (1.59)	0.2205* (1.78)	0.0193*** (3.03)	0.0234*** (3.51)	0.0235*** (3.51)
ROA	12.0142*** (6.04)	12.1710*** (6.11)	12.1423*** (6.12)	0.3505* (1.88)	0.3430* (1.84)	0.3456* (1.84)
Capital Intensity	4.2719*** (5.61)	4.4250*** (5.63)	4.3797*** (5.54)	-0.1318*** (-3.57)	-0.1281*** (-3.48)	-0.1315*** (-3.57)
Leverage	2.7254* (1.68)	3.0286* (1.85)	2.8012* (1.78)	0.1889*** (2.65)	0.2065*** (2.85)	0.1894** (2.58)
Firm Age	-0.0683*** (-3.72)	-0.0645*** (-3.49)	-0.0591*** (-3.06)	-0.0028*** (-3.04)	-0.0023*** (-2.68)	-0.0023** (-2.39)
Family Ownership	-1.1003 (0.73)	-0.8439 (-0.55)	-0.9398 (-0.61)	0.1150 (1.48)	0.1342* (1.72)	0.1217 (1.56)
Founder as Chairman	-0.2767 (-0.53)	-0.4209 (-0.83)	-0.6078 (-1.25)	-0.0319 (-0.89)	-0.0389 (-1.07)	-0.0421 (-1.16)
Industry Fixed Effect	YES	YES	YES	YES	YES	YES
Year Fixed Effect	YES	YES	YES	YES	YES	YES
Clustering by Firms	YES	YES	YES	YES	YES	YES
R-square	0.1857	0.1923	0.1955	0.0468	0.0499	0.0495
No of Observations	2291	2291	2291	1539	1539	1539

Table 5
Family trust and firm performance

This table reports the results of the use of family trust on firm performance during critical periods, conditioning on conflict potential. Firm performance is measured by Tobin's Q. Critical periods are represented by leadership succession and financial crisis. Conflict potential is proxy by the number of branches and number of generations of the family. Variable definitions can be found in the appendix. ***, **, * indicate significance levels of 0.01, 0.05 and 0.10 respectively.

Dependent Variable = Tobin's Q

Critical Period = Conflict Potential =	Leadership Succession				Financial Crisis			
	Branches	Generations			Branches	Generations		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Intercept	1.2645** (2.00)	1.0980 (1.66)	2.1877*** (3.13)	2.0683*** (2.90)	1.0750** (2.59)	1.0835*** (2.60)	1.1996*** (2.75)	1.1917*** (2.69)
Trust	-0.2002 (-0.59)	-0.2917 (-0.82)	-0.5276 (-0.84)	-0.7911 (-1.24)	0.1196 (0.57)	0.0605 (0.32)	0.0745 (0.24)	-0.0087 (-0.03)
Conflict Potential	-0.1050*** (-3.49)	-0.1104*** (-3.76)	-0.3718** (-2.27)	-0.4161** (-2.50)	-0.0219 (-1.43)	-0.0224 (-1.42)	-0.0621 (-0.91)	-0.0578 (-0.82)
Trust * Conflict Potential	0.0060 (0.11)	0.0265 (0.48)	0.2072 (0.81)	0.3199 (1.28)	-0.0087 (-0.31)	0.0019 (0.07)	0.0012 (0.01)	0.0334 (0.32)
Critical Period		0.0227 (0.09)		-0.4022 (-0.89)		0.0399 (0.40)		0.1436 (0.87)
Trust * Critical Period		0.5350 (1.11)		1.4317 (1.53)		0.4503* (1.97)		0.6770* (1.92)
Critical Period * Conflict Potential		0.0301 (1.17)		0.2375 (1.60)		0.0041 (0.24)		-0.0303 (-0.44)
Trust * Critical Period * Conflict Potential		-0.1123** (-2.13)		-0.5884* (-1.85)		-0.0899** (-2.47)		-0.2829** (-2.02)
Firm Size (ln of sales)	0.0100 (0.16)	0.0082 (0.13)	0.0096 (0.14)	0.0020 (0.03)	0.0823** (2.21)	0.0822** (2.20)	0.0802** (2.09)	0.0805** (2.10)

Sales Growth	0.2012** (2.24)	0.2027** (2.22)	0.2034** (2.27)	0.2070** (2.28)	0.0883* (1.93)	0.0938** (2.04)	0.0901* (1.95)	0.0916** (1.98)
Capital Intensity	0.3055 (0.81)	0.3049 (0.81)	0.2704 (0.65)	0.2922 (0.71)	-0.2218 (-1.23)	-0.2175 (-1.21)	-0.2338 (-1.30)	-0.2277 (-1.27)
Leverage	0.6455 (1.08)	0.6445 (1.09)	0.1979 (0.32)	0.1640 (0.27)	-0.0845 (-0.27)	-0.00703 (-0.22)	-0.1492 (-0.48)	-0.1361 (-0.43)
Firm Age	0.0067 (1.13)	0.0068 (1.13)	0.0043 (0.71)	0.0043 (0.70)	0.0038 (0.82)	0.0037 (0.81)	0.0036 (0.74)	0.0035 (0.73)
Family Ownership	-1.0503 (-1.66)	-0.9823 (-1.56)	-1.0080 (-1.60)	-0.9042 (-1.46)	-0.2340 (-0.71)	-0.2442 (-0.73)	-0.2452 (-0.73)	-0.2618 (-0.77)
Founder as Chairman	0.0686 (0.55)	0.1313 (0.88)	0.8324 (0.66)	0.1416 (0.94)	-0.2450* (-1.68)	-0.2520* (-1.71)	-0.2356 (-1.58)	-0.2427 (-1.62)
Industry Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Year Fixed Effect	YES	YES	YES	YES	YES	YES	YES	YES
Clustering by Firms	YES	YES	YES	YES	YES	YES	YES	YES
R-square	0.2983	0.3068	0.2506	0.2603	0.1214	0.1255	0.1156	0.1199
No of Observations	408	408	408	408	1735	1735	1735	1735

Table 6
The impact of sibling structure on the choice of trust ownership

This table reports results of probit regressions of sibling structure (number of founder's sons and daughters) on the probability of using family trust at year 2008. Variable definitions can be found in the appendix. The numbers in the parentheses are p-values. ***, **, * indicate significance levels of 0.01, 0.05 and 0.10 respectively.

	Dependent Variable = <i>Trust</i>			
	(1)	(2)	(3)	(4)
Intercept	-0.9596* (0.0893)	-1.1826 (0.1029)	-0.8412 (0.2309)	-1.0044* (0.0798)
Son	0.0321 (0.6834)	0.4114** (0.0311)	0.0264 (0.7425)	0.3291** (0.0401)
Son (square term)		-0.0665** (0.0329)		-0.0520** (0.0388)
Daughter	0.1579* (0.0806)	0.1778* (0.0612)	0.3423* (0.0826)	0.3778** (0.0493)
Daughter (square term)			-0.0495 (0.2822)	-0.0574 (0.2036)
Generations	0.0117 (0.9485)	0.1070 (0.6665)	0.0175 (0.9431)	-0.1311 (0.4941)
Family Ownership	0.4589 (0.4513)	0.3323 (0.6501)	0.4453 (0.5387)	0.4109 (0.5050)
Firm Size (ln of assets)	0.0479 (0.4593)	0.0159 (0.8313)	0.0304 (0.6778)	0.0584 (0.3770)
ROA (average)	-0.0043 (0.7102)	-0.0135 (0.3625)	-0.0124 (0.4017)	-0.0037 (0.7484)
Leverage (average)	0.704 (0.2952)	0.6312 (0.4444)	0.5901 (0.4703)	0.6925 (0.3108)
MB (average)	0.0264 (0.2914)	0.0408 (0.1822)	0.0426 (0.1571)	0.0303 (0.2416)
No of Observations	205	205	205	205

Table 7
Family trust and firm investment policy (2SLS)

This table reports the results of the 2SLS analysis regarding the use of family trust on the firm's investment policy, conditioning on conflict potential. Number of founder's daughters is used as the instrumental variable. Variable definitions can be found in the appendix. ***, **, * indicate significance levels of 0.01, 0.05 and 0.10 respectively.

Conflict Potential =	Cash Dividends scaled by EBIT		Capital Expenditures		Employees Growth	
	Branches	Generations	Branches	Generations	Branches	Generations
	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	0.5590* (1.92)	0.5206 (1.63)	-3.3564 (0.70)	-2.2967 (-0.63)	-0.2811* (-1.71)	-0.2067 (-1.25)
Predicted Trust	-0.7674 (-0.74)	-1.3808 (-1.20)	10.4169 (0.74)	13.6460 (1.39)	-0.1387 (-0.74)	-0.3221 (-0.83)
Conflict Potential	-0.1075 (-0.41)	-0.4642 (-0.59)	0.5112 (1.29)	1.3140* (1.90)	-0.0042 (-0.52)	-0.0298 (-0.92)
Predicted Trust * Conflict Potential	0.0599 (0.47)	0.3163 (0.99)	-2.7272 (-1.37)	-6.9089** (-2.33)	-0.0083 (-0.28)	0.0578 (0.43)
Firm Size (ln of market equity)	-0.0001 (-0.01)	0.0030 (0.11)	0.6931** (2.61)	0.5721*** (3.23)	0.0330*** (3.36)	0.0281*** (2.85)
ROA	-0.8161* (-1.91)	-0.7898* (-1.69)	13.5599*** (5.87)	12.6423*** (6.06)	0.3444* (1.87)	0.3561* (1.92)
Capital Intensity	-0.1727 (-1.41)	-0.1291 (-0.90)	5.6833*** (3.59)	5.2356*** (4.12)	-0.0826* (-1.79)	-0.0847 (-1.56)
Leverage	-0.7106*** (-4.03)	-0.6189*** (-2.85)	4.4266** (2.04)	2.9262 (1.55)	0.2534*** (3.20)	0.2599*** (2.87)
Firm Age	0.0028 (1.12)	0.0017 (0.64)	-0.0784*** (-2.70)	-0.07190*** (-2.97)	-0.0029*** (-3.01)	-0.0029** (-2.37)
Family Ownership	0.3535* (1.65)	0.4169* (1.71)	0.1945 (0.07)	-1.0516 (-0.44)	0.1787* (1.94)	0.1852* (1.81)
Founder as Chairman	-0.1501 (-1.14)	-0.1366 (-1.12)	-1.3035 (-1.14)	-1.8347** (-2.49)	-0.0622 (-1.44)	-0.0529 (-1.19)
Industry Fixed Effect	YES	YES	YES	YES	YES	YES
Year Fixed Effect	YES	YES	YES	YES	YES	YES
Clustering by Firms	YES	YES	YES	YES	YES	YES
No of Observations	1903	1903	2291	2291	1539	1539

Table 8
Family trust and firm performance (2SLS)

This table reports the results of the 2SLS analysis regarding the use of family trust on firm performance during critical periods, conditioning on conflict potential. Number of founder's daughters is used as the instrumental variable. Variable definitions can be found in the appendix. ***, **, * indicate significance levels of 0.01, 0.05 and 0.10 respectively.

Dependent Variable = Tobin's Q

Critical Period = Conflict Potential =	Leadership Succession		Financial Crisis	
	Branches	Generations	Branches	Generations
	(1)	(2)	(3)	(4)
Intercept	-1.3103 (-0.60)	-2.0876 (-0.41)	-0.8032 (-0.31)	-0.0810 (-0.09)
Predicted Trust	2.0081 (0.97)	-0.4349 (-0.09)	3.8923 (0.61)	2.8693 (1.11)
Conflict Potential	-0.0151 (-0.15)	-0.2052 (-0.69)	0.1157 (0.55)	0.2537 (1.03)
Predicted Trust * Conflict Potential	-0.3917 (-1.20)	-0.2868 (-0.18)	-0.6657 (-0.67)	-1.1921 (-1.31)
Critical Period	1.0356 (0.41)	3.5777 (0.44)	1.1262 (0.97)	0.8852 (1.27)
Predicted Trust * Critical Period	-1.9013 (-0.24)	-17.2037 (-0.46)	-2.9853 (-0.73)	-0.9712 (-0.53)
Critical Period * Conflict Potential	0.0208 (0.14)	-0.4349 (-0.33)	-0.0888 (-0.74)	-0.2306 (-1.25)
Predicted Trust * Critical Period * Conflict Potential	-0.0886 (-0.15)	4.0814 (0.44)	0.2766 (0.58)	0.2923 (0.51)
Firm Size (ln of sales)	0.1344 (1.22)	0.2023 (0.74)	0.2124 (1.17)	0.1470*** (2.60)
Sales Growth	0.2176 (1.34)	0.0122 (0.03)	0.0544 (0.66)	0.0561 (1.04)
Capital Intensity	0.6034 (0.90)	1.2536 (1.02)	-0.1056 (-0.30)	-0.1385 (-0.59)
Leverage	1.2663 (1.47)	0.7839 (0.54)	0.0449 (0.08)	-0.2666 (-0.67)
Firm Age	-0.0034 (-0.22)	0.0023 (0.17)	0.0104 (0.69)	0.0060 (0.95)
Family Ownership	-0.9106 (-0.89)	-1.5174 (-0.77)	-0.1666 (-0.20)	-0.4410 (-0.83)
Founder as Chairman	0.2449 (1.10)	0.1809 (0.66)	-0.1894 (-0.42)	-0.3927* (-1.85)
Industry Fixed Effect	YES	YES	YES	YES
Year Fixed Effect	YES	YES	YES	YES
Clustering by Firms	YES	YES	YES	YES
No of Observations	408	408	1735	1735

Appendix

Figure 1 – Relationship among the settlor, trustee and beneficiaries in family trust

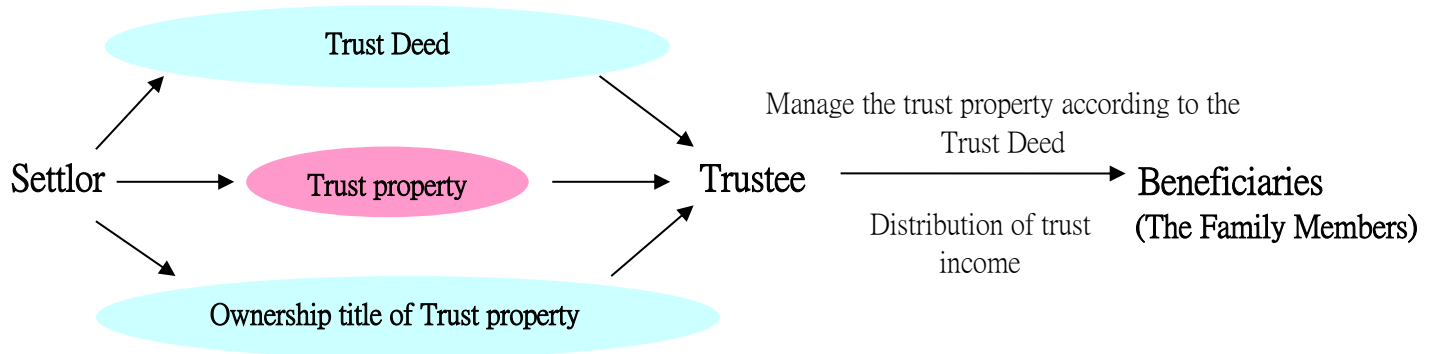
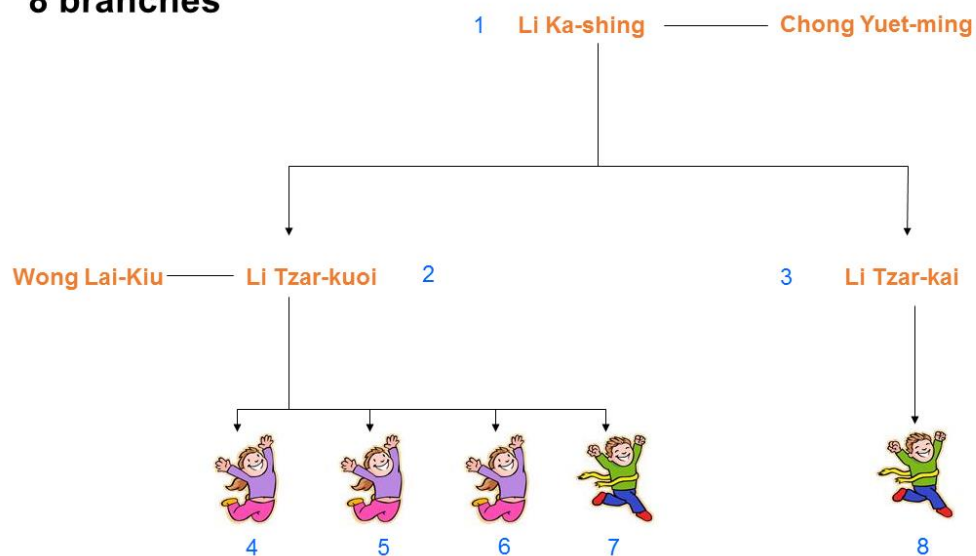


Figure 2 – Li Ka-shing's Family Structure (as of year 2008)

3 generations
8 branches



Variable Definitions

Variable Abbreviation	Definition
Trust	◆ A dummy variable equals to one if the firm holds their family ownership through a family trust and zero otherwise;
Branches	◆ Total number of branches in the family where a branch indicates a married couple;
Generations	◆ Current generation of the family;
Daughter	◆ Number of founder's daughters
Son	◆ Number of founder's sons
Capital Expenditures	◆ Firm's annual capital expenditures scaled by previous year end book assets;
Employees Growth	◆ Current Year's Total Employees / Last Year's Total Employees – 1;
Cash Dividends (ln)	◆ Equals to the natural log of total annual cash dividends;
Cash Dividends scaled by EBIT	◆ Total annual cash dividends divided by (positive) earnings before interest and tax;
Cash Dividends scaled by Sales	◆ Total annual cash dividends divided by total sales;
Tobin's Q	◆ Firm's Tobin's Q which equals to (Fiscal Year-End Market Value of Equity + Book Value of Debt) / Total Assets
Leadership Succession	◆ A dummy variable equals to one if the observation is in the year of t or t+1 where t is the year in which a leadership succession occurred and zero otherwise;
Financial Crisis	◆ A dummy variable equals to one if the observation is in the year 1997 or 1998 (during which the Asian Financial Crisis occurred) and zero otherwise;
Firm Size (ln of sales)	◆ Firm Size calculated as natural log of Total Sales;
Firm Size (ln of market equity)	◆ Firm Size calculated as natural log of Market Value of Equity;
Firm Size (ln of assets)	◆ Firm Size calculated as natural log of Total Assets;
ROA	◆ Firm's Return on Assets which equals to Net Income before Preferred Dividends + ((Interest Expense on Debt – Interest Capitalized) * (1-Tax Rate)) / Last Year's Total Assets;
ROA (average)	◆ Five-year average ROA from 2004 to 2008;
Capital Intensity	◆ Firm's Capital Intensity which equals to Gross Property Plant and Equipment / Total Assets;
Leverage	◆ Firm's Leverage which equals to Total Debt / Total Assets;
Leverage (average)	◆ Five-year average Leverage from 2004 to 2008;
Firm Age	◆ The number of years since the firm was run by the family;
Family Ownership	◆ Total family ownership percentage in the family firm.
Founder as Chairman	◆ A dummy variable equals to one if the chairman (in the current year) is the founder of the family firm;
MB (average)	◆ Five-year average MB from 2004 to 2008 where MB (market to book ratio) = market value of total equity / book value of total equity.