Doctoral Dissertation

Ownership Structure, Firm Performance, and Business Group Restructuring in Large Family Business Groups in Korea

February 2014

KYUHO JIN

College of Business Administration

The Graduate School

Seoul National University

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지도교수 박 철 순

이 논문을 경영학박사 학위논문으로 제출함

2013년 10 월

서울대학교 대학원
경영학과 경영학 전공
진 규 호

진규호의 경영학박사 학위논문을 인준함

2013년 12 월

위 원 장 _____ 이 동 기 _____ (인)

부위원장 _____ 박 남 규 _____ (인)

위 원 _____ 조 승 아 _____ (인)

위 원 _____ 김 성 훈 _____ (인)

위 원 _____ 박 철 순 _____ (인)

ABSTRACT

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KYUHO JIN
College of Business Administration
The Graduate School
Seoul National University

Family business groups are ubiquitous around the world particularly outside the U.S. and the United Kingdom and exhibit a very unique ownership pattern—separation of cash flow rights from control rights. Based on agency theory, the dominant view takes this separation of cash flow rights from control rights as socially undesirable since it has potential to destroy firm value and eventually social welfare by distorting incentive structure of shareholders. An evolving body of literature, however, increasingly realizes that the separation can have much profounder implications than the dominant view simply sets forth for inner-workings and strategic choices of family business groups and that much has yet to be understood. Drawing from the complementary lenses of stewardship theory, internal market hypothesis, and

institutional theory, this thesis endeavors to add to this stream of research by delving deeper into ramifications of this unique ownership pattern in the context of Korean large family business groups or Chaebols.

Zeroing in on the firm level of analysis, Study 1 investigates the relation between the separation of cash flow rights from control rights and economic performance of firms affiliated with Chaebols. Diverging from the dominant view grounded in agency theory and in keeping with the internal market hypothesis, study 1 entertains the possibility that the separation of cash flow rights from control rights is positively associated with firm performance and value in the context of Chaebols. Using the data between 2003 and 2010, study 1 found that the separation is positively associated with firm (operating) performance, but not with market value. It also found that the effect of the separation is moderated by business group performance, analysts coverage, R&D expenditure, and organizational slack. In order to address the endogeneity, study 1 employed the Arellano-Bond linear generalized method of moments (GMM) estimator in the panel data setting. This study calls into question the dominant explanation that views the separation as inflicting harm on firm performance. In so doing, it calls

for attention to family business groups, the context in which the separation generally occurs, in that this context substantially alters the theoretical process put forth by the dominant explanation. This study offers insights to policy makers planning to enforce/revoke the regulation on the separation of cash flow and control rights in pursuit of corporate governance reform especially in countries with poor shareholder protection.

Elevating the focus to the business group level, study 2 examines how the unique ownership structure impinges upon restructuring strategy of family business groups in emerging economies. Drawing on the corporate diversification literature, study 2 posits that related as well as vertically integrated business portfolio reduces risk. Then, it argues that family cash flow rights are positively associated with restructuring that increases relatedness and vertical integration of business portfolio because the family as a large shareholder has strong incentive to reduce risk and variability. In addition, study 2 proposes that in the presence of institutional and market pressure for restructuring towards related and vertically de-integrated business portfolio, the separation of cash flow and control rights motivates the family to actively respond to this pressure. Because the family is

typically unable to conform to the institutional pressure for good corporate governance, it may attempt to neutralize this pressure by responsively conforming to the other institutional pressure, which I believe pertains to "substitution response" (Okhmatovskiy & David, 2012). Study 2 empirically tests these hypotheses in the context of Chaebols. The results show that family cash flow rights are positively associated with restructuring that increases relatedness and vertical integration of business portfolio and that the separation of cash flow and control rights is negatively associated with restructuring that increases vertical integration.

Taken together, this dissertation enriches our knowledge on the family business groups that has been dominated by agency theory. Bringing to the fore the internal market hypothesis and institutional theory, it systematically unravels how the ownership pattern uniquely observed in family business groups shapes their functioning and dictates their strategic choices and outcomes both at the firm-level and the group-level which have been relatively less understood.

Keywords: Separation of Cash Flow and Control rights, Family Business Group, Internal Capital Market, Institutional Pressure

Student Number: 2010-30154

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GENERAL INTRODUCTION

Business groups are ubiquitous around the world particularly outside the U.S. and the United Kingdom and take control of a substantial portion of industrial output; their economic significance is widely acknowledged (Carney, Gedajlovic, Heugens, Van Essen, & Van Oosterhout, 2011; Granovetter, 1994; Khanna & Yafeh, 2007; Yiu, Lu, Bruton, & Hoskisson, 2007). Quite revealing according to empirical evidence is that most business groups are indeed family business groups whose ownership structure exhibits a very unique pattern—i.e., separation of cash flow rights from control rights (Almeida & Wolfenzon, 2006b; Masulis, Pham, & Zein, 2011). Scholars have regarded this separation as inducing a novel type of agency problem—i.e., principal-principal conflicts—by distorting the controlling family's incentive structure and rendering it insulated from capital market discipline (Morck, Wolfenzon, & Yeung, 2005). According to this view, the controlling family is able as well as motivated to pursue its own interest at the expense of other minority shareholders and engages in non-value maximizing investments, expropriation, and tunneling (Bebchuk, Kraakman, & Triantis, 2000; La Porta, Lopez-de-Silanes, & Shleifer, 1999; Morck et al., 2005; Shleifer & Vishny, 1997). In this regard, the separation is perceived as destroying firm value and performance, and family business groups, by

extension, are argued to be just "villains" (Claessens, Djankov, & Lang, 2000a) or "parasites" (Khanna & Yafeh, 2007) on the grounds that they provide the venue for self-serving behaviors of the controlling family.

There are, however, two caveats in this perspective. For one thing, it neglects the possibility that the separation is not a sufficient condition but merely a necessary condition for the family's self-serving behaviors. A substantial body of literature on family firms suggests that the family does not always pursue its own interests at the expense of the others; the family's behavioral characteristic cannot be precisely described by the narrow "rational economic model of man" (Donaldson, 1990a:371; 1990b). For another, it erroneously regards as solely driven by agency motive the inner-workings and developmental trajectories of business groups that engender the separation. In contrast, a burgeoning literature begins to show that there exist alternative mechanisms whereby the separation obtains (Almeida & Wolfenzon, 2006b; Masulis et al., 2011; Villalonga & Amit, 2009); then, the influence of the separation on the behavior of family business groups needs to be altered accordingly. This thesis aims to redress these two oversights and seeks to offer a more accurate explanation as to how the separation

influences strategic choices, outcomes, and inner-workings of family business groups in the context of Korean large family business groups or Chaebols.

In this spirit, study 1 inquires into the linkage between the separation and performance at the firm level. In a departure from the dominant view, study 1 connects the separation of cash flow and control rights with the workings of internal capital market and underscores its positive ramification for affiliate performance. At the same time, it complements the dominant view by putting an added emphasis on the distinct behavioral aspects, or stewardship, of the family as the controlling shareholder. Further, to better understand the influences of the internal capital market and the unique behavioral aspect of the family, study 1 takes several contingencies into consideration to help demarcate the boundaries of my theoretical arguments.

Study 2 shifts gears and delves into the question of how the unique ownership pattern dictates the strategic choice at the business group level. In so doing, study 2 introduces institutional theory over and above agency theory to the analysis of the effect of the separation on restructuring strategy of family business groups. It proposes that in

the presence of institutional pressure for restructuring towards related and vertically de-integrated business portfolio, the separation of cash flow and control rights forces the family to actively conform to this institutional pressure. Because the family is typically unable to comply with the institutional pressure for good corporate governance (Carney, 2008b; Chang, 2006), it may attempt to neutralize the pressure by responsively conforming to the other institutional pressure, which I believe has close connection with "balance tactics" (Oliver, 1991) or "substitution response" (Okhmatovskiy & David, 2012).

Taken together, this thesis advances our understanding on the family business groups that has been dominated by agency theory. Identifying alternative theoretical mechanisms other than agency theory, it provides insights into the question of how the ownership pattern uniquely observed in family business groups shapes their functioning and dictates their strategic choices and outcomes both at the firm-level and the group-level.

STUDY1: SEPARATION OF CASH FLOW AND CONTROL RIGHTS AND FIRM PERFORMANCE IN LARGE FAMILY BUSINESS GROUPS IN KOREA

ABSTRACT

This study examines how separation of cash flow (i.e., ownership) and voting (i.e., control) rights influences economic performance and value of firms affiliated with large family business groups. As opposed to the dominant view grounded in agency theory, I argue that the separation of cash flow and control rights is positively associated with firm performance and value in the context of family business groups. Using the data from the large family business groups in Korea between 2003 and 2010, this study found that the separation is positively associated with firm (operating) performance, but not with market value. I also found that the effect of the separation is moderated by business group performance, analysts coverage, R&D expenditure, and organizational slack. In order to address the endogeneity, I adopted the Arellano-Bond linear generalized method of moments (GMM) estimator in the panel data setting. This study calls into question the dominant explanation that views the separation as inflicting harm on firm performance. In so doing, it calls for attention to family business groups, the context in which the separation most generally occurs, by suggesting that this context substantially alters the theoretical process put forth by the dominant explanation. This study offers insights to policy makers planning to enforce/revoke the regulation on the separation of cash flow and control rights in pursuit of corporate governance reform especially in countries with poor shareholder protection.

Keywords: Separation of Cash Flow and Control rights, Stewardship, Internal Capital Market, Family Business Group

INTRODUCTION

The controlling minority shareholder (hereafter CMS) is ubiquitous around the world especially outside the United States (Claessens, Djankov, & Lang, 2000b; Faccio & Lang, 2002; La Porta et al., 1999). In the CMS structure, the controlling minority shareholder exercises control over a firm with merely a meager portion of cash flow rights of the firm or equity claims on the firm's cash flows, resulting in "a radical separation" of cash flow and control rights (Bebchuk et al., 2000:295). Scholars have regarded this separation as inducing a new sort of agency problem by distorting the controlling shareholder's incentive structure and rendering him/her insulated from capital market discipline (Morck et al., 2005). According to this view, the controlling shareholder is able as well as motivated to pursue his/her own interest at the expense of other minority shareholders and engages in non-value maximizing investments, expropriation, and tunneling (Bebchuk et al., 2000; La Porta et al., 1999; Morck et al., 2005; Shleifer & Vishny, 1997). Consequently, it is widely accepted that the separation destroys firm value and performance. And most empirical evidences lend support to this view (e.g., Baek, Kang, & Park, 2004; Claessens, Djankov, Fan, & Lang, 2002; Cronqvist & Nilsson, 2003; Joh, 2003; Lemmon & Lins, 2003; Lins, 2003; Mitton, 2002).

This view, however, is derived with loose connection to the context in which the separation generally occurs—i.e., family business groups. This is surprising, given that a wealth of research evidence has revealed that the separation is observed mostly in firms affiliated with the "family-controlled conglomerates" or family business groups (Almeida & Wolfenzon, 2006b; Bebchuk et al., 2000:296; La Porta et al., 1999; Masulis et al., 2011). The context of family business groups is critical for precisely understanding the performance implication of the separation because it may undermine the validity of the two implicit assumptions adopted by the dominant view. First, the dominant view assumes that the controlling minority shareholders are always rational and self-interested and thereby pursue their own interests even at the cost of the firm's long-term prospect or likelihood of survival. Albeit plausible, this assumption may not always hold in the context of family business groups. Literature indicates that the family is emotionally attached to and identifies itself with its firms (Gomez-Mejia, Cruz, Berrone, & De Castro, 2011). Accordingly, its firms are thought of as "an asset to pass to family members or their descendants rather than wealth to consume during their lifetimes" (Anderson & Reeb, 2003b:657; Bertrand & Schoar, 2006); firms are less likely to be an object from which the family extract as much private benefits as

possible (Burkart, Panunzi, & Shleifer, 2003; Gomez-Mejia et al., 2011; Gomez-Mejia, Makri, & Kintana, 2010; Miller, Minichilli, & Corbetta, 2013). Then, it could be tenuous to unconditionally model the controlling shareholders as a rational, self-interested actor (Granovetter, 2005). Unfortunately, however, such unique behavioral aspects of the family has not been adequately entertained in the dominant lens.

Second, the dominant view is by and large premised upon an implicit assumption that firms are autonomous or stand-alone; so each firm is analyzed in isolation (cf. Orru, Biggart, & Hamilton, 1997). If firms are stand-alone as in the United States, it may stand to reason that the separation arises solely from the control enhancing motive by the controlling shareholders (Almeida & Wolfenzon, 2006b). A growing body of literature, however, increasingly recognizes that in the context of family business groups the separation can also come about as a by-product of the well-functioning internal capital market, namely, group equity investments (Almeida, Park, Subrahmanyam, & Wolfenzon, 2011; Faccio, Lang, & Young, 2010; Khanna & Yafeh, 2007; Masulis et al., 2011; Villalonga & Amit, 2009). Since tapping the internal capital market is argued to bring about various financing benefits by addressing information asymmetry (Myers & Majluf, 1984; Williamson,

1985) and by circumventing capital market failure (Khanna & Palepu, 2000a, b; Khanna & Yafeh, 2007), it then should be legitimate to surmise that "the net effect [of the separation] on value may not always be negative" (Villalonga & Amit, 2009:3050). Even so, this aspect of the separation has not been taken into account by the dominant view, either.

I seek to fill these gaps by confining our analysis to the family business groups. In keeping with the recent literature, I connect the separation of cash flow and control rights with the workings of internal capital market and underscore its positive ramification for performance. At the same time, I complement the literature by putting an added emphasis on the distinct behavioral aspects of the family as the controlling shareholder. To better understand the influences of the internal capital market and the unique behavioral aspect of the family, I consider several contingencies to help demarcate the boundaries of our theoretical arguments. In so doing, I address the concern about the endogeneity typically arisen in the relation between ownership structure and performance (Almeida et al., 2011:449; Demsetz & Lehn, 1985) by adopting the Arellano-Bond generalized method of moments (GMM) estimator in the panel dataset. Using the sample of the large

family business groups in Korea or Chaebols during periods between 2003 and 2010, I find that the separation of cash flow and control rights is positively associated with operating performance but not with market valuation and that business group performance, relative firm size, capital intensity, and organizational slack moderate the positive relation.

This study contributes to the literature in several ways. First, it brings the context of family business groups directly into the spotlight, recognizing the possibility that this context could substantially alter the theoretical process put forth by the dominant explanation. Second, this study takes into account the actuality that shareholders are not homogeneous but vary in terms of their behavioral pattern according to their identities (Hoskisson, Hitt, Johnson, & Grossman, 2002). By delving into the family among others as one distinct type of shareholders, this study sheds further light on how the shareholder identity shifts the traditional agency argument. Besides, I offer boundary conditions for the family's influence. Finally, this study introduces an effective method for addressing the endogeneity or reverse causality in the panel data structure. This is important, in that prior studies examining the performance implication of the separation have been relatively unsuccessful in addressing the endogeneity

concern, which calls into question the statistical consistence of their parameter estimates (Adams & Ferreira, 2008; Baek et al., 2004).

THEORY AND HYPOTHESES

Recent surveys reveal that in marked contrast to the conventional image, modern corporations are not widely held, but in the hands of just a small number of controlling shareholders especially outside the United States and the United Kingdom (Claessens et al., 2000b; Faccio & Lang, 2002; La Porta et al., 1999). This ownership pattern is also known as CMS structure (Bebchuk et al., 2000). Equally revealing is the fact that CMS structure is virtually always concurrent with a radical separation of cash flow and control rights which inevitably violates the "one share-one vote" principle (Adams & Ferreira, 2008; Grossman & Hart, 1988; Harris & Raviv, 1988). Indeed, scholars have suggested that the violation of one share-one vote principle is socially undesirable and holds negative implications for firm value and ultimately social welfare (Grossman & Hart, 1988; Harris & Raviv, 1988), with reason being that it distorts incentive structure of shareholder via unfair redistribution of power (Burkart & Lee, 2008).

In this spirit, prior literature typically attends to its dark side mainly through the lens of agency theory. Fundamentally, it regards the separation as arisen from the controlling shareholders' self-interested motive for extracting private benefits of control even at the expense of other minority shareholders' wealth. Besides, since the separation allows the controlling shareholders to be entrenched from capital market discipline, prior literature views the separation as encouraging as well as enabling them to engage in such self-serving behaviors; the controlling shareholders' self-seeking behaviors are likely to be unchecked (Almeida & Wolfenzon, 2006b; Morck et al., 2005). Such self-serving behaviors include investment in non-value maximizing projects, expropriation of minority shareholders, and tunneling, to name but a few (Bebchuk et al., 2000; Johnson, La Porta, Lopez-de-Silanes, & Shleifer, 2000b; Morck et al., 2005; Shleifer & Vishny, 1997). Taken together, it is concluded that the separation of cash flow and control rights destroys firm value and performance.

Empirical evidences generally seem to lend support to this explanation (e.g., Baek et al., 2004; Claessens et al., 2002; Cronqvist & Nilsson, 2003; Joh, 2003; Lemmon & Lins, 2003; Lins, 2003; Mitton, 2002). For example, using the data from the public firms in eight East

Asian economies, Claessens and colleagues (2002) find that separation of cash flow and control rights decreases firm value measured as market-to-book ratios. Similarly, based upon the public firms in East Asian countries during periods of the Asian financial crisis, Mitton (2002) provides evidence that the separation negatively impacts firm value measured as buy-and-hold stock returns. Lemmon and Lins (2003) confirm this finding. Using a sample of the 800 public firms listed on East Asian countries during periods of the Asian crisis, they show that firms exhibiting separation of cash flow and control rights suffer from relatively low buy-and-hold stock returns. Likewise, using the data from eighteen emerging markets and taking various dependent variables such as Tobin's Q, market-to-book ratio, and ROA, Lins (2003) also corroborates the explanation that the separation destroys firm value and performance. To sum, there is seeming theoretical and empirical agreements.

Family Business Groups and Separation of Cash Flow and Control Rights

However, it is worthwhile to note that prior studies have relatively overlooked the context in which the separation generally occurs. As Bebchuk and colleagues aptly point out, the CMS structure and concurrently observed separation of cash flow and control rights

are found “particularly in countries whose economies are dominated by family-controlled conglomerates” (2000:296) or family business groups (Almeida & Wolfenzon, 2006b; Morck et al., 2005). To precisely understand the ramifications of the separation, I maintain that this context merits further consideration insofar as it may generate non-negligible variances in the motive and performance implications of the separation (Almeida & Wolfenzon, 2006b; Masulis et al., 2011; Villalonga & Amit, 2009). In essence, a family business group is a combination of two independent contexts: (1) “the family” as one distinct type of the controlling shareholders and (2) “business groups,” a set of legally independent firms bound together by multiple informal and/or formal ties in the pursuit of coordinated and concerted actions for mutual objectives (Granovetter, 1994, 2005; Khanna & Rivkin, 2001, 2006; Leff, 1978). In what follows, I expound upon how these two contexts can substantially modify the dominant view’s account of the net effect of the separation on firm value and performance one by one.

The seminal piece by La Porta and colleagues and ensuing research have consistently classified controlling shareholders into family, state, widely held financial, widely held corporation, and others,

with the largest portion being accounted for by the family (Claessens et al., 2000b; Faccio & Lang, 2002; La Porta et al., 1999). Nonetheless, less attention has been paid to the possibility that the behavior of the controlling shareholders can substantially vary depending on their identities (cf. Hoskisson et al., 2002; Shleifer & Vishny, 1997). A vast amount of literature on family firms indicates that the family as an economic agent manifests distinctive cognitive and behavioral patterns (Bertrand & Schoar, 2006; Gomez-Mejia et al., 2011:771). For instance, the family is strongly attached to and identifies itself with its firms and derives emotional satisfaction through non-pecuniary private benefits of control, or "amenity potential" without detriment to the firms (Burkart et al., 2003; Demsetz & Lehn, 1985). As a consequence, its risk preference and decision-making criteria may decidedly diverge from those of other types of shareholders (Burkart et al., 2003; Gomez-Mejia et al., 2011; Gomez-Mejia et al., 2010; Miller et al., 2013). Further, its behavior is not always self-interested or rational (Anderson & Reeb, 2003a), but contingent upon a variety of situational factors (Corbetta & Salvato, 2004; Gomez-Mejia et al., 2011; Schulze, Lubatkin, & Dino, 2003; cf. Wiseman & Gomez-Mejia, 1998). In parallel with this perspective, Gomez-Mejia and colleagues successfully explain non-rational, inefficient behaviors of the family

with regard to various strategic choices by drawing on a behavioral agency model (cf. Wiseman & Gomez-Mejia, 1998) and a novel conception of "socio-emotional wealth" or "affective endowments" (Gomez-Mejia et al., 2011; Gomez-Mejia et al., 2010). It could well be, then, that the dominant explanation grounded in rational, self-interest actors may not always hold up for the family-controlled firms (Granovetter, 2005).

At this juncture, it is profitable to notice that the argued negative impact of the separation is implicitly premised upon the postulation that the controlling shareholders pursue their own interests to the detriment of the firm's long-term prospect or likelihood of survival[1], which is often exemplified by the reported increasing rate of expropriation during the macroeconomic crisis when the likelihood of firm failure peaks (Johnson, Boone, Breach, & Friedman, 2000a; Lins, 2003). In marked contrast to this dominant view, it has been long argued that from the viewpoint of the family firms are "an asset to pass to family members or their descendants rather than wealth to consume during their lifetimes" (Anderson & Reeb, 2003b:657; Bertrand & Schoar, 2006); firms are less likely to be an object from which the

[1] Indeed, Khanna and Yafeh insightfully liken this postulation to "an unquestioned axiom" (2007:346).

family extract as much private benefits as possible. Relatedly, a line of literature suggests that the family does not want to blindly pursue private benefits of control, with the reason being that it cares about its reputation (Sheehan, 2000). The family is argued to strive to "avoid being stigmatized as an irresponsible corporate citizen" (Gomez-Mejia et al., 2011:682), and thereby be responsive to external pressure from stakeholder groups by being socially responsible (Adams, Taschian, & Shore, 1996; Dyer & Whetten, 2006). On balance, I part company with the dominant explanation and suggest that the family as a controlling shareholder might behave more like a steward rather than an agent for its firms (Anderson & Reeb, 2003b; Davis, Schoorman, & Donaldson, 1997; Wasserman, 2006) and that the separation of cash flow and control rights might not necessarily have negative implication for firm value and performance. Seen from a slightly different angle, this reasoning highlights that the separation may be a necessary condition but is not a sufficient condition for the self-seeking behavior of the controlling shareholders.

I now switch gears to the other context, i.e., business groups. Granted, it is plausible to presume that in a stand-alone corporation the separation of cash flow and control rights arises from the control

enhancing motive by the controlling shareholders. Yet a growing body of literature begins to entertain another possibility that in the business group context the separation may come about at least in part as a natural consequence or by-product of the well-functioning internal capital market aimed at seizing investment opportunities (e.g., Almeida et al., 2011; Almeida & Wolfenzon, 2006b; Masulis et al., 2011). Among a variety of forms of the internal capital market operation (Almeida et al., 2011; Shin & Stulz, 1998), the literature pinpoints equity investments by affiliate firms in other affiliate firms as the one to bring about the separation of cash flow and control rights (Masulis et al., 2011). To illustrate, suppose that an affiliate firm holds promising opportunities but falls short of its own operating cash flow[2]. Then, the family as the controlling shareholder of the business group would want the other affiliate firms with superfluous cash flow to make equity investments in the firm in need of money (Gertner, Scharfstein, & Stein, 1994; Khanna & Rivkin, 2001; Khanna & Yafeh, 2007; Stein, 1997). At the same time that this operation increases the joint utility of the business group by exploiting the internal capital market to its potential, it deepens the separation of cash flow and control rights unless the

[2] It is also similar to suppose the family has a promising investment opportunity and wants to create a firm to realize it.

investing affiliate firms are 100% owned by the family (Faccio, Lang, & Young, 2001; Yiu et al., 2007). To see why, suppose that the family owns 30% of the shares of firm A which holds a sufficient amount of cash flow and that firm B with promising investment projects suffers from insufficient operating cash flow and thereby plans to issue new shares. And suppose also that the family gets firm B to purchase 30% of the firm B's newly issuing shares. Then, the end result is that the family obtains additional 30% of control rights of firm B by purchasing only 9% (=0.30*0.30) of cash flow rights of firm B, aggravating the separation (Almeida & Wolfenzon, 2006b; Villalonga & Amit, 2009).

One may argue that if the family relies purely on the external capital market the separation will neither come into being nor increase. However, prior literature reports that the family displays strong tendency to raise capital from the internal capital market in preference to the external capital market. This is mainly due to the increased risk of losing control when external capital is used given that "equity issues dilute the family's control block and debt issues raise the risk of bankruptcy" (Morck et al., 2005:673). In parallel, any control loss is argued to severely reduce the family's socio-emotional wealth or emotional satisfaction (Burkart et al., 2003; Schulze, Lubatkin, Dino, &

Buchholtz, 2001). Hence, it is no surprise that the family is loath to raise funds from the external capital market even if missing valuable investment opportunities may harm its firms' long-term prospects (Adams & Ferreira, 2008).

On the other hand, literature suggests that tapping into the internal capital market delivers financial advantages primarily because the cost of capital from the internal capital market is likely to be lower than that from the external capital market (Almeida & Wolfenzon, 2006b; Masulis et al., 2011; Stein, 1997). There are several reasons for the cheaper cost of the internal capital market, particularly for the firms affiliated with family business groups. First, according to the renowned pecking order theory, raising funds from the external capital market becomes costly under conditions of *information asymmetry* (Gertner et al., 1994; Myers & Majluf, 1984; Williamson, 1975). The underlying logic is that issuing stocks signals that the stock is over-priced when insiders are deemed to have superior information. Thus, stock price will *ceteris paribus* fall, and the cost of capital in the public equity market will increase. Group equity investments in the internal capital market does not suffer from such information asymmetry[3]. Granted, some

[3] Notice that this reasoning relies on the assumption of the semi-strong form of market efficiency (Myers & Majluf, 1984). Literature has verified that insiders can

scholars maintain that internal capital market may not be efficient primarily because rent-seeking behavior by divisional managers with bargaining power may lead the corporate headquarters to overinvest weak divisions and/or under-invest strong divisions (Ozbas & Scharfstein, 2010; Scharfstein & Stein, 2000). Yet, this is of less concern in the family business group for two reasons. For one thing, in family business groups, the family chairman wields virtually absolute power, leaving no room for such rent-seeking behaviors. For another, affiliate firms in the family business groups share social identity and cohesion through kinship relations which effectively militate against the rent-seeking behavior of affiliate managers; in fact, most managers of affiliate firms become to forge personal relations with the family during their job tenure (Granovetter, 2005; Khanna & Rivkin, 2006).

Second, business groups in general prosper in emerging economies whose external capital market tends to be under-developed. Due to resulting shortage of external capital, the capital cost of external market is much higher than that of internal market (Khanna & Palepu, 2000a, b; Khanna & Yafeh, 2007). Third, internal capital market can benefit from the lowest capital from the most credible firms. Suppose

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enjoy abnormal return, providing support for this form of market efficiency (Bodie, Kane, & Marcus, 2011; Fama, 1970, 1991).

that an affiliate firm that enjoys the lowest cost of external capital raises funds from the external market and distributes them to other affiliate firms. Then, the firms on average are able to enjoy the lower capital cost (Bianco & Nicodano, 2006; Stein, 1997). This has some connection to "liquidity spillovers" or "leverage spillovers" (Lamont, 1997; Lang, Ofek, & Stulz, 1996). Last but not least, under conditions of imperfect investor protection, there should be always concern about expropriation (Almeida & Wolfenzon, 2006b; Morck et al., 2005; Shleifer & Vishny, 1997). Consequently, raising funds from external capital market will be costly. Unlike the first point above, this is "a moral hazard type problem" (Almeida & Wolfenzon, 2006b:2640). Worse yet, there exists a self-reinforcing, endogenous dynamic[4]. The relatively high cost of the external capital market increases reliance on the internal capital market, which leads to a high degree of separation of cash flow and control rights of affiliate firms (Almeida et al., 2011; Almeida & Wolfenzon, 2006b). Then, stock market will price out the firms' risk of expropriation (i.e., *moral hazard concern*) resulting from the separation (Adams & Ferreira, 2008; Almeida & Wolfenzon, 2006b:2640; Harris & Raviv, 1988; Morck et al., 2005). This means that the capital cost of the external market rises further for the affiliate

[4] This is also called as simultaneity (Greene, 2008).

firms (Almeida & Wolfenzon, 2006b), leading to a greater reliance on the internal capital market. This sort of endogenous dynamic continues to work on and on until it reaches an equilibrium at which the cost of internal capital market is by far cheaper than that at the initial point as well as that of external capital market. Table A1 summarizes the differences between the dominant explanation and our explanation in the context of family business groups.

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To sum, the separation of cash flow and control rights delivers financial benefits in the business group context. For the firms affiliated with business groups, "group equity" or equity investments from other brethren firms allows the receiving firms to enjoy the low cost of capital without passing up valuable investment opportunities[5] (Almeida et al., 2011). Admittedly, this increases the separation of cash flow and control rights as a by-product and thereby worsens expropriation concern. Even so, as discussed above, the separation of cash flow and

[5] If the separation is not allowed and thereby control needs to be diluted the family as the controlling shareholder will prefer to pass up even valuable investment opportunities (Adams & Ferreira, 2008).

control rights might not necessarily be translated to the family's self-serving behavior. Even if the family engages in such self-serving behavior, I expect the benefits from internal capital markets to be greater than the negative impact from such expropriation by the family. Thus, contrary to the dominant explanation, I hypothesize:

Hypothesis 1. Separation of cash flow rights and control rights is positively associated with firm performance and value.

Contingencies Altering the Posture of the Family

Our reasoning thus far hinges upon the assumption that the family on average serves as a steward for its firms. Yet this does not necessarily imply that the family's posture toward its firms always remains still. Indeed, prior literature has already identified several situational factors that may alter the family's posture toward its firms (Gomez-Mejia et al., 2011; Wasserman, 2006). If the family's posture and behaviors change as such contingent upon situations, the theorized impact of the separation of cash flow and control rights on firm value and performance will be also subject to alteration. In this regard, an investigation into contingencies helps better understand the theoretical process I put forward.

Viewed broadly, such an investigation helps increase our theory's rigor and validity for two reasons. First, it can delineate a clear boundary of our theoretical argument. Typically, a theory is less likely to hold in every and all situations. In extreme cases, its prediction can go so far as to be reversed. It is thus often necessitated to take into account various contingencies to add precision to the theoretical argument. Second and more importantly, it provides an opportunity to test our theory, albeit indirectly. This is important because our theory aggregates the effects of two mutually exclusive theoretical constructs, i.e., family and internal capital market. Then, finding support for the theory does not necessarily imply that the family has a say in the theoretical process. This conundrum can be solved by examining contingencies that affect the family's posture but not the benefits from internal capital market. If the main relation is moderated by these contingencies, it indirectly indicates that the family has real influence on the process I herein theorize. In this spirit, I consider two contingencies as follows.

Family managers. One unavoidable aspect observed in large family business groups is that not all affiliate firms are managed by family members. This is because the number of affiliate firms often far

surpasses the number of family members. The family has no choice but to let non-family members manage some affiliate firms. On the other hand, according to our theory, family managers should behave more like stewards than non-family managers. Granted, it is possible that non-family managers have developed allegiance to the firms during their tenure and thereby serve as stewards. Even so, it is plausible to reason that the extent of stewardship behavior is greater for family managers. Consequently, the argued positive impact of the separation on firm performance should be stronger if the affiliate firm is managed by family managers inasmuch as family managers are less likely than non-family managers to engage in self-seeking behaviors. Thus, I hypothesize:

Hypothesis 2. The positive relation between separation of cash flow and control rights and firm performance and value is positively moderated by family managers, in such a fashion that when the firm is managed by family members, the positive relation becomes stronger.

Business group performance. Prior studies have indicated that the family takes considerable heed of the economic well-being of its firms (Gomez-Mejia et al., 2011). This is not surprising, given that "as this [performance] hazard increases, the family is increasingly exposed to potentially simultaneous losses to the family's standard of living,

patrimony, and socioemotional wealth. In the extreme case, the family loses everything if the firm does not survive" (Gomez-Mejia et al., 2011:688). The family will be more willing to accept the loss of socioemotional wealth when the source of socioemotional wealth is in grave peril. In the context of family business groups made up of a number of firms, failure of one or two firms would not damage the family's socio-economic wealth that much. Rather, the more significant contingency to the family is presumably the declining overall performance of its group. A dismal economic performance of its business group as a whole indicates a signal of serious crisis, inducing the family to be much more of a steward. Conversely, if its business group performs quite well, the family may find the room for pursuing private benefits or other performance-deteriorating socioemotional wealth, inducing the family to be much more of an agent. Thus, I hypothesize:

Hypothesis 3. The positive relation between separation of cash flow and control rights and firm performance and value is negatively moderated by business group performance, in such a fashion that as business group performance decreases, the positive relation becomes stronger.

Contingencies Altering the Benefits from Internal Capital Market

It has hitherto been implicitly assumed that the relative efficiency of the internal capital market stays invariable and that the utility of receiving capital from the internal market is uniform across the firms in a family business group. However, the reality is that the relative cost of internal capital depends on the efficiency of external capital markets and firm characteristics. If our argument grounded in the internal capital market is valid, I should be able to detect this contingent nature. As an indirect test of our argument building on the internal capital market, I consider three contingencies in what follows.

External capital market efficiency. Drawing on the pecking order theory, I argue that information asymmetry between insiders and outside investors renders internal capital cheaper than external capital (Myers & Majluf, 1984). Notice that this argument relies on the semi-strong-form efficient capital market hypothesis in which prices reflect all public information, if not private or insider information (Fama, 1970). At the same time, the literature on capital market efficiency suggests that as external capital market advances and becomes more efficient, prices increasingly reflect even private information, gravitating towards the strong-form efficiency (Fama, 1970, 1991). Under conditions of the strong-from efficiency, insiders cannot have

information advantage over outside investors, and therefore the cost of external capital becomes even cheaper than that of internal capital. Stated differently, the relative efficiency of and financing advantages from the internal capital market depend on the efficiency of external capital market. If the external capital market is efficient enough to reflect even private information, the main effect of the separation on firm performance will be weaker. Thus, I hypothesize:

Hypothesis 4. The positive relation between separation of cash flow and control rights and firm performance and value is negatively moderated by the external capital market efficiency, in such a fashion that as the capital market efficiency improves, the positive relation becomes weaker.

R&D expenditure. In a similar vein, the relative efficiency of the internal capital market is also dictated by the extent to which the focal firm makes investments that engender information asymmetry between insiders and outside investors (Aboody & Lev, 2000). If a firm bears a large amount of information asymmetry as a result, the external capital market will price that out by imposing a higher cost of capital; hence, such a firm benefits more from the use of the internal capital market. Accordingly, the positive effect of the separation becomes greater for such a firm given that the separation indicates a greater use of internal capital.

Following prior literature, I conceive of R&D expenditure as effectively revealing information asymmetry of a firm (Aboody & Lev, 2000; Huddart & Ke, 2007). Admittedly, virtually all the corporate investments can bring about information asymmetry in theory. However, R&D expenditure is regarded as one of the best proxies for information asymmetry because it meets the following three conditions (Aboody & Lev, 2000). First, R&D expenditure is idiosyncratic to the firm, so that outside investors are less able than insiders to accurately derive information on its productivity and value. Second, there is no organized market for R&D investments through which productivity and value are precisely evaluated. Finally, accounting measurement of R&D expenditure is imperfect, inhibiting outside investors from correctly assessing productivity and value of a certain R&D expenditure on a basis of public information such as annual reports. Then, it is plausible to conclude that outside investors experience a greater amount of information asymmetry when investing in a firm with a large R&D expenditure. Taken together, the positive effect of the separation will be greater for the firm with a large R&D expenditure. Thus, I hypothesize:

Hypothesis 5. The positive relation between separation of cash flow and control rights and firm performance and value is positively

moderated by R&D expenditure, in such a fashion that as the R&D expenditure of a firm increases, the positive relation becomes stronger.

Organizational slack. One of the two problems that firms planning to raise capital in the external capital market should contend with is *information asymmetry* between insiders and external capital lenders (Myers & Majluf, 1984). According to the pecking order theory, this is the reason why retained earnings should be the first source for the investment project. The other is the concern of the *moral hazard* by the family, namely, expropriation and tunneling (Almeida & Wolfenzon, 2006b; Morck et al., 2005). While the internal capital market arguably addresses both problems, not all affiliate firms need to solicit money from the internal capital market. Hence, if an affiliate firm holds a sufficient amount of organizational slack, it will use its own funds rather than tapping the internal capital market, a sort of roundabout way (Myers & Majluf, 1984). No doubt, then, the proposed financial benefits from the internal capital market will be smaller for such a firm. Thus, I hypothesize:

Hypothesis 6. The positive relation between separation of cash flow and control rights and firm performance and value is positively moderated by organizational slack, in such a fashion that as the organizational slack of a firm increases, the positive relation becomes weaker.

DATA AND METHODS

Sample: Large Family Business Groups in Korea

I develop theory and hypotheses in the context of large family business groups in Korea or Chaebols during periods between 2003 and 2010. Korean Chaebols during the periods provide an ideal setting for several reasons. First, according to prior literature, Chaebols represent a high degree of, and variance in, the separation of cash flow and control rights (Claessens et al., 2002; Joh, 2003; La Porta et al., 1999). Second, for group equity investments to increase the separation of cash flow and control rights as our theory delineates, the family should be financially constrained, so that it uses affiliate firms rather than itself as a funding source in the other affiliate firms necessitating capital (Almeida et al., 2011). This condition generally holds in the Chaebol context. Since Chaebols tend to be very large in size, the family's wealth is always constrained when compared to the gigantic asset size of its business group. Third, after the Asian financial crisis, government has strongly regulated debt-to-equity ratio, setting the barrier to debt market even higher. Accordingly, reliance of affiliate firms on equity market has been on the rise, increasing the validity of our theoretical process. Fourth, the Korean economies were in the process of a strong recovery during the sampling periods preceded by the Asian financial crisis;

there had been an ever-increasing demand for capital. Thus, the utility and influence of the internal capital market would have been more pronounced during the chosen periods in Korea. Besides, the chosen periods are less affected by the unexpected shocks from the Asian financial crisis in which the negative impact from the separation dominated (Mitton, 2002). Finally, parameter estimates from the single country setting are not affected by the institutional variance observed in cross-national studies which has been pinpointed as one of the confounding factors. Such institutional variance is in general hard to operationalize, rendering parameter estimates biased unless well controlled for (Adams & Ferreira, 2008)[6].

Data Sources

I collect data of ownership structure from the Korea Fair Trade Commission (hereafter KFTC). KFTC designates large business groups or Chaebols each year and mandates these groups to report their insider shareholdings (e.g., family shares), intra-group stock ownership, group-level financial information, etc. otherwise unavailable elsewhere (for details, see Almeida et al., 2011). These data are made publicly available on its website (http://groupopni.ftc.go.kr/index.jsp).

[6] One solution is using the fixed-effects estimator in the panel data. However, it is generally a daunting task to collect the panel data across a multitude of countries.

I gathered firm-level financial information from the database developed by the Korea Investors Services (KIS). The KIS database, which is equivalent to the COMPUSTAT in the U.S., provides a comprehensive set of firm-level information including company profiles and financial data on virtually all the Korean firms. Its credibility and reliability have been well established and are sufficiently evidenced by its wide use by the well-known studies on Korean Chaebols (Chang, 2003; Chang & Hong, 2000, 2002; Siegel, 2007). To test the impact of the separation of cash flow and control rights, I included in our sample only listed firms following prior studies. Financial firms were excluded for the sake of comparability.

While our variables include ratio variables such as debt-to-equity ratio and current ratio, some observations represent unacceptably high values in the ratio variables if only because the denominator is infinitesimal. To reduce the effect from such outliers, I first ran the regression and calculated standardized residuals. Then, I dropped the observations having the standardized residuals greater than 5[7]. After this procedure, our data consisted of 121 listed firms affiliated with

[7] I reran the regression after dropping the observations with Cook's (1977,1979) distance over N/4 where N is the number of observations and found the similar pattern.

Chaebols. Since I constructed unbalanced panel data from 2003 to 2010, our final data consisted of 589 affiliate firm-year observations.

Dependent Variable

Operating performance. Following prior studies (Chang, 2003a; Chang & Hong, 2000; Douma, George, & Kabir, 2006), I measured operating performance of a firm as return on assets (ROA). I operationalized the return as yearly earnings before interests and taxes (EBIT) because it effectively captures operating profitability without being influenced by financial structure and taxes (Chang & Choi, 1988; Chang & Hong, 2000; Chu, 2004). Then, I divided it by total assets. Finally, to control for industry heterogeneity, I industry-adjusted by standardizing this ROA at the SIC 2 digit level. Thus, the ROA in each industry has mean of zero and standard deviation of one. For robustness check, I retested our models using net income divided by total assets and found a similar pattern. This variable was measured at time *t*.

Market value. Following prior studies, I measured market value using two widely used ratios (Claessens et al., 2002; Demsetz & Villalonga, 2001). One is Tobin's Q. I operationalized this variable as the ratio of total liabilities plus the market value of equity divided by the book value of total assets (Douma et al., 2006; Lemmon & Lins, 2003). The

other is market-to-book ratio. I operationalized this variable as the market value of equity divided by the book value of equity (Lins, 2003; Mitton, 2002). These variables were measured at time *t*.

Independent variables

Separation of cash flow and control rights. Prior literature has employed various measures. Unfortunately, such practice has hindered this stream of literature from evolving by making it difficult to legitimately compare the findings across studies (see Adams & Ferreira, 2008 for a review). To address this concern, I used three different measures for this variable. First, I operationalized this as "wedge" or control rights minus cash flow rights of the family for the focal firm (Claessens et al., 2002; Joh, 2003; La Porta, Lopez-De-Silanes, Shleifer, & Vishny, 2002). To allow for indirect cash flow rights through any possible cross-holding chains or paths over and above direct cash flow rights, I used ultimate cash flow rights as in Almeida and colleagues (2011). To calculate this, I first constructed cross-shareholding matrices or adjacency matrices (Wasserman & Faust, 1994) every year for the Chaebols on the basis of the intra-group stock ownership data provided by KFTC. Then, I used the following formula (cf. Bonacich, 1987):

$$u' = f'(I + A + A^2 + A^3 + \cdots) = f'(I - A)^{-1}$$

Where u is the N X 1 vector of ultimate cash flow rights of the family for N firms, f is the N X 1 vector of the family's direct cash flow rights of N firms, I is the N X N identity matrix, and A is the cross-shareholding matrix.

Second, since the above measure, wedge, might not allow for the non-linearity of our theorized relation (Adams & Ferreira, 2008), I alternatively employed "control rights leverage" which is defined as control rights divided by ultimate cash flow rights (Lemmon & Lins, 2003; Lins, 2003). To reduce the undesirable statistical effect of the abnormal behaviors of the measure occurring when its denominator becomes close to zero, I conducted a natural logarithmic transformation on the control rights leverage. Finally, I used another measure for separation of cash flow and control rights used by Mitton (2002). This measure was operationalized as control rights minus ultimate cash flow rights divided by control rights. For the matrix calculation, I used MATLAB R2012b (The MathWorks, 2012). These variables were measured at time *t*.

Moderating variables in relation to the family posture

Family managers. I operationalized this variable as a dummy which is coded one if family members serve as registered executives or directors and coded zero otherwise.

Business group performance. I operationalized this as operating performance of a business group with which the focal firm is affiliated. Operating performance of a business group is computed as average operating performance of affiliate firms weighted by total asset. This variable was measured at time *t*.

Moderating variables in relation to internal capital market

External capital market efficiency. Prior literature has developed a variety of measures for the capital market efficiency (e.g., Bodie et al., 2011; Griffin, Kelly, & Nardari, 2010; Summers, 1986). Given that our theory concerns the information asymmetry between insiders and outside investors, a measure for the semi-strong form efficiency rather than the weak form efficiency will be appropriate. Following prior literature, I chose analysts coverage as our measure for external capital market efficiency (Griffin et al., 2010). Because analyst activities translate into collection of value-relevant information and its dissemination into the capital market, the extent and frequency of analyst activities, i.e., analysts coverage, decrease the size as well as

value of private information, ultimately improving the semi-strong from capital market efficiency. I operationalized analysts coverage as the number of firms about which analysts issued reports divided by total number of firms in the KOSPI (Korea Composite Stock Price Index) market. This measure is computed on an annual basis.

R&D expenditure. Following prior literature, I operationalized this variable as R&D expenditure divided by the number of employees (Hill & Snell, 1989). While R&D expenditure as a percentage of sales is widely used, I decided not to use this variable. Since sales are heavily influenced by short-term cyclical fluctuations, R&D expenditure as a percentage of sales also suffers a non-substantial variation. This variable was measured at time *t*.

Organizational slack. I used two organizational slack variables (Greve, 2003). One is *unabsorbed slack* which is operationalized as current assets divided by current liabilities. This variable is often called liquidity (Chang & Hong, 2000). The other is *potential slack* which is measured as debt-to-equity ratio. This variable is also called *leverage* and captures the amount of external capital potentially available. These variables are measured at time *t*.

Control variables.

Firm-level attributes. I included *firm size* to control for the size effect on profitability where firm size was measured as logarithm of sales in thousands of wons. I also controlled for prior performance to factor a partial adjustment process of firm performance into our estimation models, which will be detailed below. For this measure, I conducted one year lag for the two dependent variables (Almeida et al., 2011). Thus, this variable is measured at time *t-1*. I also controlled for an important intangible firm-level resource influencing performance: *advertisement expenditure* (Chatterjee & Wernerfelt, 1991). If this variable co-varies with the independent variable, omission of this variable could generate biased parameter estimates. This variable is operationalized as advertising expenditure divided by sales. All the firm-level control variables except for prior performance were measured at time *t*.

Macro-level attributes. To control for macro-economic effects, I included *year dummies*. Inserting year dummies is important because our estimation technique detailed below requires that errors be not correlated across individuals (Roodman, 2006:26). In contrast, I did not include industry dummies because our estimation technique

automatically purges and thereby controls for any type of time-constant variables or fixed-effects. For the detail, see below.

Estimation Technique. For test of hypotheses, I used the dynamic panel regression to allow for the partial adjustment process of firm performance (Greene, 2008). Even though firm performance is supposed to converge toward an equilibrium level to reflect the effect of the mechanisms put forth above, their adjustment processes are often slower than expected, mainly due to "organizational inertia" retarding the effects of the strategically intended reallocation of organizational resources. Following prior literature (Bae & Gargiulo, 2004; Greene, 2008:ch.12; Haveman, 1992), I model profitability as a partial adjustment process as follows:

$$\pi_{it} = X_{it}^{'}\beta + \rho\pi_{it-1} + \mu_i + \varepsilon_{it}$$

Where π_{it} represents profitability for firm *i* at time *t*, X_{it} represents a vector of independent and control variables for firm *i* at time *t*, μ_i represents unobserved heterogeneity (or fixed-effects) for firm *i*, and ε_{it} represent disturbances, ρ represents the rate of partial adjustment process for profitability that lies in the open interval of (-1,1).

Two concerns arise from this model specification; one is methodological and the other theoretical. First, if the lagged dependent variable is inserted as another explanatory variable, then the lagged dependent variable, by construction, becomes endogenous (see Arellano, 2003; Baltagi, 2008; Greene, 2008). Second, as a bunch of studies point out, the independent (i.e., ownership structure) and dependent variable (i.e., economic performance) are essentially endogenous (Demsetz & Lehn, 1985); we cannot rule out the possibility of reverse causality unless we address the endogeneity. To address these two sorts of endogeneity, I decided to adopt the Arellano-Bond estimator (Arellano & Bond, 1991). This estimator effectively controls for not only within-group unobserved heterogeneity (i.e., fixed effects) but the endogeneity of various kinds in the panel data structure by relying on the generalized method of moments (GMM) (Arellano, 2003; Roodman, 2006). Specifically, it deals with endogeneity by instrumenting endogenous variables with predetermined as well as exogenous variables. Together with such exogenous variables as macroeconomic time effects, the lagged terms of covariates can serve as valid instruments, given that they are predetermined and hence cannot be associated with the present error term as long as error terms are not serially correlated (Ahn & Schmidt, 1995, 1997; Anderson &

Hsiao, 1981; Arellano & Bond, 1991; Arellano & Bover, 1995; Blundell & Bond, 1998; Holtz-Eakin, Newey, & Rosen, 1988). Furthermore, this estimator expunges unobserved heterogeneity or fixed effects by first-differencing or orthogonal deviation operation (Arellano, 2003; Roodman, 2006). Thus, this estimator, similar to the fixed-effects estimator, generates consistent estimates with or without unobserved heterogeneity or fixed-effects. Taken together, this estimator addresses the two different types of endogeneity simultaneously not to mention unobserved heterogeneity.

For the estimation, the Arellano-Bond estimator makes use of sample moment conditions (or orthogonality conditions) derived from instruments, the number of which is in general greater than the number of parameters to be estimated—i.e., over-identified. It, then, is evident that all the moment conditions cannot be met at once. To solve this over-identification problem, the Arellano-Bond estimator relies on the generalized method of moments (GMM) by which consistent and efficient estimates are obtained as a solution to minimizing the overall deviation from orthogonality conditions (Hansen, 1982; Hayashi, 2000). To control for heteroscedasticity, I report robust standard errors. For

estimation, I used the *xtabond2* command (Roodman, 2006) in STATA 11 (StataCorp., 2009).

RESULTS

Table A2 presents descriptive statistics and correlations for all variables used in this analysis. In order to reduce non-essential collinearity, all variables used in the interactions were mean-centered (Cohen, Cohen, West, & Aiken, 2003). For ease of interpretation, the non-centered variables were used to create the descriptive statistics. To examine the multi-collinearity issue, I calculated variance inflation factors (VIFs) for all models. The largest VIF was far below 10, with mean VIF around 2. Thus, there is less concern about multi-collinearity.

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Table A2 is about here

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Table A3 is about here

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Tables A3 to A5 present the Arellano-Bond dynamic panel estimates for each dependent variable. In these tables, I used “wedge” or control rights minus the ultimate cash flow rights of the family as the

measure of separation of cash flow and control rights. Although not reported in the interest of conserving space, several points are worthwhile to note. First, the test for second-order autocorrelation of first-differenced residuals (i.e., AR(2)), one of the specification tests suggested by Arellano and Bond (1991), signifies no problem; second-order autocorrelation of residuals (i.e., ε_{it}) is not detected in all models. Second, Hansen's *J* statistic for overidentifying restrictions is insignificant in every model. Given that the null hypothesis of this test is the joint validity of all chosen instruments, this test result indicates that the instruments our models used were all valid, i.e., exogenous, as a whole. This test, however, cannot examine the validity of each instrument group or subset of suspect instruments. So, I also checked difference-in-Sargan statistic of each instrument group and confirmed that all instrument groups each were valid. Finally, whereas in contrast to the Sargan test, the Hansen test is robust to non-spherical error term structure, i.e., heteroscedasticity and autocorrelation, its statistical power is weakened by too many instruments (Roodman, 2006, 2007). Given that the number of instruments is much smaller than the number of cross-sectional observations in our results, there is less concern about the proliferation of instruments (Roodman, 2006, 2008).

Table A3 presents the Arellano-Bond dynamic panel estimates for operating performance. Model 1 is a baseline model that includes only control variables. Model 2 inserts the ultimate cash flow rights of the family into the baseline model. Consistent with expectation, the family's cash flow rights are positively associated with operating performance (β=0.275, $p<0.05$). Model 3 inserts our focal variable, separation of cash flow and control rights, into the model 2. The result provides strong support for hypothesis 1 (β=0.245, $p<0.01$).

Models 4 and 5 insert the moderating variables that are theorized to have connection with the family's posture toward a firm. Model 4 inserts the family manager dummy as a moderator. According to the result, I find no support for hypothesis 2. This may arise from the fact that non-family managers in family business groups are unable to freely engage in self-seeking behaviors or that they are as much of steward as family managers given that most non-family managers of affiliate firms become to forge personal relations with the family during their job tenure (Chang, 2003b; Granovetter, 2005; Khanna & Rivkin, 2006). Models 5 inserts business group performance as a moderator. I find support for hypothesis 3 that connects BG performance with the family's posture (β=-0.361, $p<0.05$).

Models 6 to 9 insert the moderating variables that are hypothesized to have association with the benefits from internal capital market. Model 6 inserts analysts coverage as a moderator. I find support for hypothesis 4 (β=-1.124, $p<0.10$). Thus, as analysts coverage increases, the efficiency of internal capital market relative to external capital market decreases, weakening the positive effect of the separation. Model 7 inserts R&D expenditure as a moderator. I find support for hypothesis 5 (β=0.016, $p<0.05$). Models 8 and 9 insert unabsorbed and potential slack. I find partial support for hypothesis 6 (β=-0.054, $p<0.05$). Model 10 includes all the variables at once. While the general pattern remains consistent, the significances of interaction terms of business group performance and analysts coverage disappear.

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Table A4 is about here

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Table A5 is about here

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Tables A4 and A5 present Arellano-Bond dynamic panel estimates for market value, Tobin's Q and market-to-book ratio,

respectively. Again, I used “wedge” or control rights minus the ultimate cash flow rights of the family as the measure of separation of cash flow and control rights. According to the results, the effects of the separation are no longer significant for both dependent variables of market value. Set alongside the results from operating performance, this may indicate that shareholders discount stock price of firms affiliated with family business groups by virtue of the concern about expropriation even if the family ownership and the separation seem to have positive impact on operating performance as evidenced in our results above. I interpret this inconsistency as reflecting the social constructionist view of financial market behavior. As Zajac and Westphal insightfully elucidate, stock market reaction to a certain corporate practice is substantially influenced by “the prevailing institutional logic and the degree of institutionalization of the practice” (2004:433). Thus, the insignificant results of the separation in the models of market value are presumably a result of beliefs, values, and rules historically deeply rooted in investors that regard the separation as harmful (Adams & Ferreira, 2008).

To statistically confirm this inconsistency, I compare the coefficients of the separation of cash flow and control rights from the

two non-nested models for operating performance and Tobin's Q and market-to-book ratio after standardizing the two dependent variables. By using the stacked approach suggested by Weesie (1999), I calculate the covariance matrix of all the parameters included in the stacked models. Then, I tested the null hypothesis that the two coefficients are the same. According to the result, the null hypothesis was rejected. It thus is statistically confirmed that the positive effect of the separation of cash flow and control rights in the model of operating performance is greater than that in the model of market valuation.

Robustness check

For robustness check, I replicated these tests by using the other two measures for the separation of cash flow and control rights—(1) natural logarithm of control rights leverage and (2) control rights minus ultimate cash flow rights divided by control rights. The general patterns found in tables A6 to A11 remain similar for the main relation, indicating robustness of our results against various measures of separation of cash flow and control rights prior studies adopted.

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Tables A6 to A11 are about here

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DISCUSSION AND CONCLUSION

By bringing to the fore the firms affiliated with family business groups—the context in which the separation of cash flow and control rights most frequently occurs—I explore the relation between the separation and firm performance. Diverging from prior studies, I focus on the family as the controlling minority shareholder and argue that it serves as a steward, rather than an agent, for its firms by drawing attention to the unique behavioral aspects of the family; the family then might not necessarily pursue its own interests at the expense of other minority shareholders (cf. Davis et al., 1997; Wasserman, 2006). Further, I set forth how the separation of cash flow and control rights in the business groups can arise not merely from control enhancing motive but from internal capital market operations which bring about various financing advantages (Masulis et al., 2011; Villalonga & Amit, 2009). Taken together, I conclude that the separation is positively associated with firm performance and find strong support in the context of family business groups. Running counter to the dominant explanation that views the separation as inflicting harm on firm performance, this study holds both theoretical and policy implications and suggests a number of future research directions.

Theoretical Implications

First, this study highlights the unique behavioral aspect of the family as a controlling minority shareholder. Recent studies reveal that the controlling minority shareholders can be broken down into several homogeneous groups in terms of identities (Claessens et al., 2000b; Faccio & Lang, 2002; La Porta et al., 1999). Further, it is found that shareholders substantially vary in terms of behavioral patterns such as risk preferences, investment horizons, etc. depending on their identities (Hoskisson et al., 2002). Then, the inconsistent finding may suggest that the family differs a great deal from the other controlling shareholders. Seen from this angle, this study complements and adds precision to the prior studies by providing a fine-grained analysis on the specific type of controlling minority shareholders that accounts for the largest fraction—the family.

Second, while the firms in the prior studies were viewed and evaluated in isolation, the firms in this study are regarded as interconnected through their business groups. If a firm is stand-alone, it stands to reason that the separation can arise largely from control enhancing motives and pursuit of private benefits of control (Bebchuk et al., 2000). In marked contrast, if the firm is affiliated with a business group, the separation may stem from internal capital market

operations—i.e., group equity investments (Almeida et al., 2011; Almeida & Wolfenzon, 2006b; Masulis et al., 2011). Given that such equity investments are found to bring financial advantages (Almeida et al., 2011; Masulis et al., 2011), the separation in the context of business group could improve firm performance and market value. This consideration is important, given that the separation is observed most often in the business groups (Almeida & Wolfenzon, 2006b; Masulis et al., 2011). In this connection, this study adds to the prior studies by calling for attention to another theoretical mechanism in the context of business group.

Third, the prior studies in support of the dominant explanation were overly based on the samples from the periods of the 1997 Asian financial crisis (e.g., Baek et al., 2004; Claessens et al., 2000b; Lemmon & Lins, 2003; Lins, 2003; Mitton, 2002; cf. Ramaswamy, Li, & Petitt, 2012). It is widely accepted that during periods of such macroeconomic shocks the marginal benefits of pursuing private benefits of control at the expense of other shareholders substantially increase, rendering the negative impact of the separation salient (Johnson et al., 2000a; Lins, 2003; Mitton, 2002; Young, Peng, Ahlstrom, Bruton, & Jiang, 2008). Then, it is arguably untenable to

generalize the findings into other times; the coefficient estimates of the separation should have been downward biased. In contrast, our study is based on the data from relatively stable periods during which most firms benefit from strong industry demands and favorable macroeconomic conditions. In this regard, this study contributes to the literature by clarifying the boundary condition of the prior findings and cautioning against the simple generalization of the findings into other periods.

Finally, despite the well-received endogenous nature of the relation between ownership structure and firm performance (Demsetz & Lehn, 1985), the prior studies have been relatively unsuccessful in addressing the endogeneity (Adams & Ferreira, 2008; Baek et al., 2004). It could well be that the controlling minority shareholder decreases its ownership stake in firms with poor performance while increasing the ownership stake in firms with good performance—i.e., a reverse causality. Notice that this reverse causal relation from performance to the separation is negative. Then, the coefficient estimate of the other direction is unavoidably negatively biased unless this reverse causality is effectively controlled for. Prior studies have attempted to address this reverse causality by adopting the instrumental

variable estimation. However, as Adams and Ferriera (2008) correctly point out, the chosen instrument sets in their models do not seem to always satisfy the orthogonality (validity) condition, violation of which leads to seriously biased or inconsistent estimates (Greene, 2008; Wooldridge, 2002). This study addresses this concern by applying the renowned Arellano-Bond estimator, an advanced statistical technique, in the panel data setting. So viewed, this study contributes to the literature by underscoring the need for addressing endogeneity in the analysis of the relation between ownership structure and performance.

Practitioner/Policy Implications

Our findings offer several implications for practitioner and policy makers. First, our results interestingly show that the separation has positive impact on operating performance but not on market value. This finding is reflective of the market perception that the separation increases the risk of expropriation by the controlling minority shareholder even though it improves firm operating performance. It is notable that this pertains to the social constructionist view of financial market behavior. According to this view, stock market reaction is not merely "a function of the inherent efficiency of such practices" but a result of "the prevailing institutional logic and the degree of institutionalization of the practice" (Zajac & Westphal, 2004:433).

Thus, an important implication of this finding for stock market investors is that stock market could be less efficient than expected and that market expectation can deviate from substances (Adams & Ferreira, 2008).

Our results also reveal that the impact of the separation on operating performance and market value is not uniform, but contingent upon firm characteristics and business group conditions which determine the family's posture toward its firms and financial benefits from the internal capital market. Thus, stock market investors may benefit from referring to those factors when evaluating the stock price of firms affiliated with family business groups.

It is also profitable to note that our findings revealing the positive relation between the separation of cash flow and control rights and firm performance should not be conceived of as blindly justifying the governance practice of the separation. As Almeida and Wolfenzon (2006a) appropriately show, the internal capital market operation aimed at improving the efficiency of resource allocation inside the business group is likely to sub-optimize the efficiency of economy-wide resource allocation by inhibiting free resource flows across business group boundaries especially when more promising investment

opportunities are available outside business groups and when business groups monopolize most capital of the economy (Scharfstein & Stein, 2000). So, policy makers planning to enforce/revoke the regulation on the separation should take our results with extra caution.

LIMITATION AND FUTURE RESEARCH

Like any study, this one is not without limitations. First, it is based on a single-country data. Such a single country setting is advantageous in that it does not create the need for controlling for heterogeneous institutional settings which are typically difficult to operationalize. Some may argue that such heterogeneity of time-constant institutional settings can be accounted for if the fixed-effects estimator is employed. But the fixed-effects estimator cannot control for institutional changes (Wooldridge, 2003), and a single country study like ours still has its own value. The dark side, however, is that the results derived from such a single country study is unavoidably subject to the external validity issue. So, I believe that further investigation into other countries holds promise for enriching our knowledge. Second, I confined our analysis to the relatively large family business groups or Chaebols. Since small family business groups were excluded owing to both theoretical consideration and data

gathering issue as well, it is not certain that our findings will hold true for the small family business groups (refer to Chang & Hong, 2002:267). Our conjecture is that in the small family business groups, the financial benefits from the separation would be weaker since there should be the less budget constraint for the family. A smaller effect size of the separation from the study of the small family business groups would provide further support for our theory. Finally, this study considers only one type of the controlling minority shareholders. Given that there are other types of controlling minority shareholders that still receive as much attention, future studies would benefit from consideration of the other types of controlling minority shareholders such as the state, widely held financial, and widely held corporation (cf. Hoskisson et al., 2002; Shleifer & Vishny, 1997).

Table A1. Differences between the dominant explanation and our explanation in the context of family business group

	The dominant explanation	Our explanation in the context of family business group
The behavioral characteristics of the controlling minority shareholders	- Rational, self-interested	- Not always rational and self-interested - Contingent upon psychological and situational factors
The genesis of the separation of cash flow and control rights	- Control-enhancing motive to extract private benefits of control	- Internal capital market operation to optimize fund-raising

Table A2. Descriptive statistics and correlation matrix[a,b,c,d,e,f]

	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8
1. Operating performance	0.053	0.053	-0.274	0.233								
2. Tobin's Q	1.192	0.654	0.216	9.445	0.36							
3. Market-to-book ratio	1.392	1.225	0.073	10.793	0.31	0.93						
4. Sales[a]	3.815	8.432	112.250	0.015	0.14	0.08	0.12					
5. Advertising expenditure	0.009	0.022	0	0.244	0.15	0.18	0.18	-0.03				
6. Capital expenditure	0.048	0.050	0	0.458	0.12	0.18	0.14	0.17	0.01			
7. Family manager	0.605	0.489	0	1	-0.03	-0.26	-0.25	0.10	0.03	-0.09		
8. Business group performance	0.042	0.150	-0.916	2.160	0.17	0.12	0.11	0.02	0.04	0.12	-0.09	
9. Analyst coverage	0.378	0.012	0.357	0.404	0.09	0.14	0.15	0.00	-0.02	0.00	-0.01	-0.01
10. R&D expenditure[b]	5.624	15.910	0	305.527	0.09	0.10	0.08	0.13	0.02	0.07	-0.05	-0.05
11. Current ratio (unabsorbed slack)	1.094	1.272	0.038	22.848	0.09	0.22	0.11	-0.29	-0.03	-0.12	-0.09	0.05
12. Debt-to-equity ratio (financial slack)	1.374	1.791	0.034	36.360	-0.34	-0.06	0.09	0.13	-0.07	-0.10	0.01	-0.21
13. The ultimate cash flow rights	0.191	0.176	0	0.951	0.00	-0.16	-0.14	-0.30	-0.03	-0.11	0.27	-0.04
14. Separation between cash flow and voting rights[c]	0.229	0.163	0	0.913	-0.04	0.02	-0.02	-0.16	0.05	0.03	-0.21	0.03
15. Separation between cash flow and voting rights[d]	0.562	0.332	0	1	-0.01	0.14	0.12	0.10	0.02	0.11	-0.36	0.08
16. Separation between cash flow and voting rights[e]	1.284	1.189	0	8.422	0.01	0.13	0.11	0.10	-0.06	0.08	-0.34	0.09

a. in trillion wons
b. in billion wons
c. voting rights - the ultimate cash flow rights
d. (voting rights - the ultimate cash flow rights)/voting rights
e. Log(voting rights / the ultimate cash flow rights)
f. Correlations of |0.066| or greater significant at $p < 0.05$ and correlations of |0.086| or greater are significant at $p < 0.01$

Table A2. Descriptive statistics and correlation matrix[a,b,c,d,e] (continued)

	Mean	S.D.	Min	Max	9	10	11	12	13	14	15
1. Operating performance	0.053	0.053	-0.274	0.233							
2. Tobin's Q	1.192	0.654	0.216	9.445							
3. Market-to-book ratio	1.392	1.225	0.073	10.793							
4. Sales[a]	3.815	8.432	112.250	0.015							
5. Advertising expenditure	0.009	0.022	0	0.244							
6. Capital expenditure	0.048	0.050	0	0.458							
7. Family manager	0.605	0.489	0	1							
8. Business group performance	0.042	0.150	-0.916	2.160							
9. Analyst coverage	0.378	0.012	0.357	0.404							
10. R&D expenditure[b]	5.624	15.910	0	305.527	-0.02						
11. Current ratio (unabsorbed slack)	1.094	1.272	0.038	22.848	0.06	-0.03					
12. Debt-to-equity ratio (financial slack)	1.374	1.791	0.034	36.360	-0.02	-0.05	-0.18				
13. The ultimate cash flow rights	0.191	0.176	0	0.951	0.07	-0.11	-0.01	-0.06			
14. Separation between cash flow and voting rights[c]	0.229	0.163	0	0.913	-0.02	-0.02	0.11	0.00	-0.46		
15. Separation between cash flow and voting rights[d]	0.562	0.332	0	1	-0.05	0.12	0.07	0.02	-0.82	0.74	
16. Separation between cash flow and voting rights[e]	1.284	1.189	0	8.422	-0.05	0.16	0.08	-0.03	-0.71	0.57	0.85

a. in trillion wons
b. in billion wons per employee
c. voting rights - the ultimate cash flow rights
d. (voting rights - the ultimate cash flow rights)/voting rights
e. Log(voting rights / the ultimate cash flow rights)
f. Correlations of |0.066| or greater significant at $p < 0.05$ and correlations of |0.086| or greater are significant at $p < 0.01$

Table A3. Arellano-Bond GMM estimates for ROA[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.092	-0.041	0.015	-0.007	-0.002
		(0.072)	(0.068)	(0.061)	(0.061)	(0.074)
	$Sales_t$	0.063***	0.064***	0.065***	0.065***	0.071***
		(0.014)	(0.014)	(0.013)	(0.013)	(0.014)
	Advertising $expenditure_t$	-0.842	-0.829	-0.657	-0.833*	-0.579
		(0.514)	(0.505)	(0.445)	(0.379)	(0.453)
	Capital $expenditure_t$	-0.023	-0.027	-0.018	-0.018	-0.011
		(0.061)	(0.060)	(0.062)	(0.063)	(0.062)
Stewards vs. Agents	Family $manager_t$ (B)	0.033*	0.024	0.026*	0.024*	0.018
		(0.016)	(0.016)	(0.013)	(0.012)	(0.013)
	Business group $performance_t$ (C)	-0.021	-0.011	-0.005	-0.002	-0.005
		(0.021)	(0.018)	(0.018)	(0.018)	(0.023)
Internal capital market efficiency	Analysts $coverage_t$ (D)	0.642	0.431	0.454	0.505	0.393
		(0.530)	(0.535)	(0.507)	(0.538)	(0.516)
	R&D $expenditure_t$ (E)	-0.001	-0.000	-0.001	-0.001	-0.001
		(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
	Current $ratio_t$ (F) (unobserved slack)	-0.008	-0.007	0.000	-0.001	-0.002
		(0.005)	(0.005)	(0.005)	(0.005)	(0.004)
	Debt-to-equity $ratio_t$ (G) (financial slack)	-0.008*	-0.007+	-0.006*	-0.006*	-0.007*
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
IV	The ultimate cash flow $rights_t$		0.275*	0.261*	0.205+	0.253*
			(0.135)	(0.120)	(0.121)	(0.114)
	Separation between cash flow and voting $rights_t$ (A)			0.245**	0.251*	0.247**
				(0.093)	(0.103)	(0.092)
Interactions	(A) X (B)				-0.023	
					(0.084)	
	(A) X (C)					-0.361*
						(0.181)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	103.8	104.5	99.89	260.5	105.9
	AR(2)	0.126	0.205	0.220	0.198	0.268
	Wald chi-squared statistic	248.4	223.6	216.1	234.3	222.5

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)

Table A3. Arellano-Bond GMM estimates for ROA[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.016	-0.016	0.001	-0.004	-0.026
		(0.074)	(0.062)	(0.063)	(0.072)	(0.067)
	$Sales_t$	0.068***	0.072***	0.070***	0.067***	0.072***
		(0.014)	(0.013)	(0.012)	(0.013)	(0.013)
	Advertising $expenditure_t$	-0.794+	-0.779*	-0.255	-0.786+	-0.522
		(0.412)	(0.392)	(0.559)	(0.424)	(0.381)
	Capital $expenditure_t$	-0.025	0.007	-0.030	-0.024	0.011
		(0.062)	(0.071)	(0.057)	(0.060)	(0.059)
Stewards vs. Agents	Family $manager_t$ (B)	0.028*	0.026+	0.026*	0.024+	0.015
		(0.014)	(0.014)	(0.013)	(0.013)	(0.012)
	Business group $performance_t$ (C)	0.002	-0.012	-0.012	-0.007	0.007
		(0.017)	(0.018)	(0.017)	(0.018)	(0.018)
Internal capital market efficiency	Analysts $coverage_t$ (D)	0.460	0.302	0.474	0.477	0.343
		(0.544)	(0.508)	(0.498)	(0.507)	(0.525)
	R&D $expenditure_t$ (E)	-0.001	-0.002	-0.001	-0.001	-0.002*
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
	Current $ratio_t$ (F) (unobserved slack)	-0.006+	-0.004	-0.002	-0.003	0.002
		(0.004)	(0.005)	(0.004)	(0.004)	(0.005)
	Debt-to-equity $ratio_t$ (G) (financial slack)	-0.006*	-0.008**	-0.009**	-0.007*	-0.006**
		(0.003)	(0.003)	(0.003)	(0.003)	(0.002)
IV	The ultimate cash flow $rights_t$	0.261*	0.310*	0.264*	0.244*	0.182+
		(0.133)	(0.130)	(0.116)	(0.113)	(0.107)
	Separation between cash flow and voting $rights_t$ (A)	0.188*	0.235*	0.226*	0.242*	0.186*
		(0.089)	(0.096)	(0.107)	(0.098)	(0.085)
Interactions	(A) X (B)					-0.039
						(0.070)
	(A) X (C)					-0.241
						(0.149)
	(A) X (D)	-1.124+				-0.913
		(0.625)				(0.621)
	(A) X (E)		0.016*			0.013*
			(0.007)			(0.005)
	(A) X (F)			-0.054*		-0.053*
				(0.024)		(0.022)
	(A) X (G)				-0.002	-0.029
					(0.035)	(0.019)
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	96.32	102.1	101.7	100.1	90.77
	AR(2)	0.222	0.216	0.253	0.230	0.294
	Wald chi-squared statistic	239.2	266.2	244.1	254.8	436.6

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)

Table A4. Arellano-Bond GMM estimates for Tobin's Q[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.269	-0.250	-0.183	-0.175	-0.237
		(0.179)	(0.187)	(0.204)	(0.209)	(0.180)
	$Sales_t$	-0.103	-0.032	0.150	0.150	-0.088
		(0.281)	(0.249)	(0.204)	(0.196)	(0.238)
	Advertising $expenditure_t$	-21.745	-18.827	-15.804	-16.026	-18.467
		(16.421)	(14.792)	(12.934)	(13.062)	(14.291)
	Capital $expenditure_t$	2.329**	2.218**	1.763*	1.762*	2.276**
		(0.751)	(0.765)	(0.741)	(0.726)	(0.772)
Stewards vs. Agents	Family $manager_t$ (B)	0.259	0.082	0.302+	0.196	-0.000
		(0.232)	(0.199)	(0.183)	(0.160)	(0.162)
	Business group $performance_t$ (C)	0.391	0.185	-0.011	0.034	0.201
		(0.323)	(0.236)	(0.233)	(0.209)	(0.203)
capital market efficiency	Analysts $coverage_t$ (D)	19.141**	15.921*	13.169*	12.481*	15.682**
		(7.282)	(6.300)	(5.284)	(5.229)	(5.999)
	R&D $expenditure_t$ (E)	-0.023	-0.015	-0.018	-0.020	-0.015
		(0.024)	(0.022)	(0.020)	(0.020)	(0.020)
Internal	Current $ratio_t$ (F) (unobserved slack)	-0.335+	-0.324+	-0.273	-0.284	-0.308
		(0.190)	(0.194)	(0.189)	(0.192)	(0.197)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.049	0.045	0.041	0.031	0.061
		(0.040)	(0.035)	(0.035)	(0.027)	(0.041)
IV	The ultimate cash flow $rights_t$		2.602	2.089	2.096+	2.872+
			(1.680)	(1.310)	(1.230)	(1.506)
	Separation between cash flow and voting $rights_t$ (A)			0.653	0.959	-0.189
				(0.849)	(0.886)	(0.772)
Interactions	(A) X (B)				-0.661	
					(0.803)	
	(A) X (C)					3.705
						(2.577)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	100.3	102.0	98.32	94.98	95.43
	AR(2)	0.477	0.452	0.196	0.222	0.373
	Wald chi-squared statistic	259.6	279.2	265.5	271.2	265.6

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)

Table A4. Arellano-Bond GMM estimates for Tobins' Q[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.214	-0.233	-0.340	-0.244	-0.283
		(0.196)	(0.192)	(0.229)	(0.194)	(0.233)
	$Sales_t$	-0.083	-0.036	-0.108	-0.002	-0.016
		(0.221)	(0.222)	(0.247)	(0.196)	(0.156)
	Advertising $expenditure_t$	-17.842	-17.619	-12.726	-17.408	-9.058
		(13.780)	(13.863)	(15.875)	(13.927)	(13.216)
	Capital $expenditure_t$	2.212**	2.130**	2.450**	2.355**	2.412***
		(0.713)	(0.743)	(0.816)	(0.742)	(0.713)
Stewards vs. Agents	Family $manager_t$ (B)	0.035	0.053	0.042	0.017	-0.058
		(0.184)	(0.185)	(0.193)	(0.176)	(0.127)
	Business group $performance_t$ (C)	-0.010	0.122	0.181	0.185	0.380+
		(0.229)	(0.198)	(0.202)	(0.188)	(0.195)
Internal capital market efficiency	Analysts $coverage_t$ (D)	16.813**	15.896**	18.420**	15.391**	15.481**
		(6.010)	(5.831)	(6.531)	(5.853)	(4.986)
	R&D $expenditure_t$ (E)	-0.008	-0.012	-0.015	-0.018	-0.022
		(0.019)	(0.019)	(0.020)	(0.019)	(0.016)
	Current $ratio_t$ (F) (unobserved slack)	-0.314+	-0.318	-0.259***	-0.319+	-0.236***
		(0.187)	(0.194)	(0.059)	(0.190)	(0.059)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.019	0.037	0.029	0.034	0.019
		(0.016)	(0.031)	(0.024)	(0.029)	(0.015)
IV	The ultimate cash flow $rights_t$	2.394	2.450+	2.699*	2.085+	2.073*
		(1.462)	(1.366)	(1.365)	(1.119)	(0.992)
	Separation between cash flow and voting $rights_t$ (A)	0.177	0.054	-0.869	0.091	-0.429
		(0.737)	(0.793)	(0.740)	(0.778)	(0.724)
Interactions	(A) X (B)					-0.531
						(0.744)
	(A) X (C)					2.719
						(2.082)
	(A) X (D)	0.705				5.560
		(5.899)				(6.433)
	(A) X (E)		-0.015			0.009
			(0.075)			(0.056)
	(A) X (F)			-1.475***		-1.447***
				(0.322)		(0.389)
	(A) X (G)				0.201	0.001
					(0.350)	(0.173)
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	94.12	99.47	94.80	91.02	99.65
	AR(2)	0.483	0.403	0.491	0.394	0.486
	Wald chi-squared statistic	305.3	300.9	588.2	317.3	550.2

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)

Table A5. Arellano-Bond GMM estimates for market-to-book ratio[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.128	-0.123	-0.109	-0.039	-0.112
		(0.110)	(0.108)	(0.104)	(0.112)	(0.103)
	$Sales_t$	-0.278	-0.163	-0.164	0.134	-0.254
		(0.592)	(0.547)	(0.513)	(0.400)	(0.503)
	Advertising $expenditure_t$	-36.091	-31.386	-30.477	-25.330	-29.827
		(31.280)	(29.131)	(28.479)	(24.294)	(28.029)
	Capital $expenditure_t$	4.095**	3.898**	3.939**	3.162*	4.200**
		(1.455)	(1.406)	(1.388)	(1.339)	(1.421)
Stewards vs. Agents	Family $manager_t$ (B)	0.992*	0.602	0.503	0.627*	0.361
		(0.434)	(0.376)	(0.330)	(0.302)	(0.306)
	Business group $performance_t$ (C)	1.013	0.588	0.449	0.331	0.666
		(0.753)	(0.528)	(0.421)	(0.378)	(0.409)
Internal capital market efficiency	Analysts $coverage_t$ (D)	38.627**	31.587*	31.116**	25.049**	31.006**
		(14.350)	(12.794)	(11.962)	(9.257)	(11.889)
	R&D $expenditure_t$ (E)	-0.065	-0.048	-0.048	-0.053	-0.053
		(0.045)	(0.040)	(0.039)	(0.037)	(0.037)
	Current $ratio_t$ (F) (unobserved slack)	-0.389*	-0.375+	-0.362+	-0.304	-0.321
		(0.193)	(0.198)	(0.188)	(0.194)	(0.204)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.144*	0.148*	0.146**	0.119**	0.180**
		(0.060)	(0.058)	(0.054)	(0.045)	(0.060)
IV	The ultimate cash flow $rights_t$		6.776*	6.423*	5.027*	6.548*
			(3.396)	(2.908)	(2.389)	(2.812)
	Separation between cash flow and voting $rights_t$ (A)			0.392	1.543	-0.006
				(1.708)	(1.723)	(1.624)
Interactions	(A) X (B)				-0.873	
					(1.614)	
	(A) X (C)					5.363
						(4.102)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	95.86	98.18	95.12	101.8	92.17
	AR(2)	0.155	0.206	0.198	0.187	0.190
	Wald chi-squared statistic	184.1	212.2	221.0	223.9	208.2

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)

Table A5. Arellano-Bond GMM estimates for market-to-book ratio[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.073	-0.105	-0.145	-0.092	-0.078
		(0.106)	(0.105)	(0.124)	(0.109)	(0.125)
	$Sales_t$	-0.195	-0.179	-0.236	0.060	-0.028
		(0.480)	(0.467)	(0.498)	(0.414)	(0.343)
	Advertising $expenditure_t$	-27.227	-28.063	-23.326	-27.423	-17.543
		(26.366)	(26.762)	(30.007)	(26.541)	(25.024)
	Capital $expenditure_t$	3.796**	3.669**	4.122**	3.818**	4.163**
		(1.309)	(1.405)	(1.362)	(1.337)	(1.321)
Stewards vs. Agents	Family $manager_t$ (B)	0.537+	0.568+	0.493	0.451	0.144
		(0.315)	(0.335)	(0.331)	(0.298)	(0.220)
	Business group $performance_t$ (C)	0.129	0.438	0.478	0.550	0.906*
		(0.403)	(0.385)	(0.391)	(0.379)	(0.388)
Internal capital market efficiency	Analysts $coverage_t$ (D)	31.803**	32.326**	34.214**	27.329*	26.822**
		(11.434)	(11.094)	(12.019)	(10.820)	(8.740)
	R&D $expenditure_t$ (E)	-0.030	-0.040	-0.047	-0.055	-0.059+
		(0.036)	(0.038)	(0.037)	(0.037)	(0.033)
	Current $ratio_t$ (F) (unobserved slack)	-0.347+	-0.366+	-0.286***	-0.383*	-0.243***
		(0.185)	(0.192)	(0.062)	(0.189)	(0.058)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.136**	0.136*	0.125*	0.151***	0.133***
		(0.049)	(0.055)	(0.050)	(0.039)	(0.026)
IV	The ultimate cash flow $rights_t$	5.656*	5.874*	6.290*	5.206*	5.043**
		(2.807)	(2.658)	(2.765)	(2.139)	(1.865)
	Separation between cash flow and voting $rights_t$ (A)	0.473	0.412	-0.543	0.541	0.094
		(1.390)	(1.618)	(1.613)	(1.647)	(1.496)
Interactions	(A) X (B)					-1.256
						(1.383)
	(A) X (C)					3.197
						(3.682)
	(A) X (D)	2.080				5.895
		(11.363)				(11.306)
	(A) X (E)		-0.102			0.042
			(0.143)			(0.123)
	(A) X (F)			-1.818***		-1.737***
				(0.362)		(0.387)
	(A) X (G)				-0.506	-0.815*
					(0.622)	(0.378)
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	98.16	100.2	96.48	88.13	87.55
	AR(2)	0.244	0.168	0.187	0.180	0.213
	Wald chi-squared statistic	249.9	230.0	523.9	235.0	417.2

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)

Table A6. Arellano-Bond GMM estimates for ROA[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.092	-0.041	0.003	-0.036	0.002
		(0.072)	(0.068)	(0.065)	(0.064)	(0.071)
	$Sales_t$	0.063***	0.064***	0.064***	0.067***	0.063***
		(0.014)	(0.014)	(0.013)	(0.014)	(0.012)
	Advertising $expenditure_t$	-0.842	-0.829	-0.601	-0.680	-0.586
		(0.514)	(0.505)	(0.488)	(0.462)	(0.497)
	Capital $expenditure_t$	-0.023	-0.027	-0.023	-0.023	-0.021
		(0.061)	(0.060)	(0.067)	(0.066)	(0.059)
Stewards vs. Agents	Family $manager_t$ (B)	0.033*	0.024	0.042**	0.042*	0.042**
		(0.016)	(0.016)	(0.015)	(0.016)	(0.016)
	Business group $performance_t$ (C)	-0.021	-0.011	-0.015	-0.012	-0.025
		(0.021)	(0.018)	(0.018)	(0.017)	(0.021)
Internal capital market efficiency	Analysts $coverage_t$ (D)	0.642	0.431	0.732	0.633	0.781
		(0.530)	(0.535)	(0.537)	(0.576)	(0.510)
	R&D $expenditure_t$ (E)	-0.001	-0.000	-0.001	-0.001	-0.001
		(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
	Current $ratio_t$ (F) (unobserved slack)	-0.008	-0.007	-0.004	-0.002	-0.004
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
	Debt-to-equity $ratio_t$ (G) (financial slack)	-0.008*	-0.007+	-0.007**	-0.006*	-0.006**
		(0.003)	(0.003)	(0.002)	(0.003)	(0.002)
IV	The ultimate cash flow $rights_t$		0.275*	0.392***	0.307**	0.330**
			(0.135)	(0.106)	(0.113)	(0.101)
	Separation between cash flow and voting $rights_t$ (A)			0.253***	0.217**	0.196*
				(0.066)	(0.073)	(0.078)
Interactions	(A) X (B)				-0.037	
					(0.048)	
	(A) X (C)					-0.109
						(0.073)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	103.8	104.5	104.4	95.49	99.53
	AR(2)	0.126	0.205	0.217	0.169	0.197
	Wald chi-squared statistic	248.4	223.6	253.7	241.1	260.7

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)/control rights

Table A6. Arellano-Bond GMM estimates for ROA[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.030	-0.027	-0.018	-0.027	-0.052
		(0.083)	(0.063)	(0.068)	(0.073)	(0.064)
	$Sales_t$	0.065***	0.070***	0.064***	0.066***	0.064***
		(0.014)	(0.013)	(0.012)	(0.013)	(0.011)
	Advertising $expenditure_t$	-0.747+	-0.667	-0.372	-0.621	-0.520
		(0.427)	(0.452)	(0.544)	(0.501)	(0.412)
	Capital $expenditure_t$	-0.021	-0.015	-0.013	-0.013	0.002
		(0.063)	(0.077)	(0.057)	(0.060)	(0.055)
Stewards vs. Agents	Family $manager_t$ (B)	0.041*	0.049*	0.043*	0.042**	0.030*
		(0.018)	(0.019)	(0.019)	(0.016)	(0.014)
	Business group $performance_t$ (C)	-0.005	-0.017	-0.013	-0.014	0.001
		(0.018)	(0.018)	(0.019)	(0.020)	(0.016)
Internal capital market efficiency	Analysts $coverage_t$ (D)	0.748	0.611	0.868	0.779	0.695
		(0.578)	(0.516)	(0.541)	(0.532)	(0.539)
	R&D $expenditure_t$ (E)	-0.001	-0.002	-0.001	-0.001	-0.002*
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
	Current $ratio_t$ (F) (unobserved slack)	-0.008+	-0.006	-0.008	-0.006	-0.004
		(0.004)	(0.005)	(0.006)	(0.004)	(0.004)
	Debt-to-equity $ratio_t$ (G) (financial slack)	-0.005+	-0.008**	-0.008**	-0.007*	-0.005+
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
IV	The ultimate cash flow $rights_t$	0.369***	0.399***	0.383***	0.331**	0.200+
		(0.112)	(0.104)	(0.107)	(0.106)	(0.109)
	Separation between cash flow and voting $rights_t$ (A)	0.176**	0.202**	0.216**	0.223**	0.116+
		(0.064)	(0.066)	(0.076)	(0.069)	(0.069)
Interactions	(A) X (B)					-0.037
						(0.044)
	(A) X (C)					-0.084
						(0.073)
	(A) X (D)	-0.461				-0.357
		(0.346)				(0.325)
	(A) X (E)		0.003			0.003
			(0.004)			(0.003)
	(A) X (F)			-0.044*		-0.037*
				(0.018)		(0.015)
	(A) X (G)				0.010	0.000
					(0.016)	(0.011)
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	98.73	299.7	96.57	91.51	92.57
	AR(2)	0.183	0.196	0.231	0.190	0.151
	Wald chi-squared statistic	240.0	256.6	242.1	237.3	282.2

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)/control rights

Table A7. Arellano-Bond GMM estimates for Tobin's Q[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.269	-0.250	-0.198	-0.198	-0.246
		(0.179)	(0.187)	(0.200)	(0.199)	(0.188)
	$Sales_t$	-0.103	-0.032	0.144	0.162	-0.057
		(0.281)	(0.249)	(0.225)	(0.218)	(0.254)
	Advertising $expenditure_t$	-21.745	-18.827	-16.714	-16.579	-18.812
		(16.421)	(14.792)	(13.142)	(13.189)	(14.403)
	Capital $expenditure_t$	2.329**	2.218**	1.592*	1.505+	2.093**
		(0.751)	(0.765)	(0.763)	(0.769)	(0.809)
Stewards vs. Agents	Family $manager_t$ (B)	0.259	0.082	0.364+	0.240	-0.087
		(0.232)	(0.199)	(0.195)	(0.151)	(0.183)
	Business group $performance_t$ (C)	0.391	0.185	0.032	0.039	0.381
		(0.323)	(0.236)	(0.233)	(0.227)	(0.274)
Internal capital market efficiency	Analysts $coverage_t$ (D)	19.141**	15.921*	12.998*	12.547*	14.502*
		(7.282)	(6.300)	(5.556)	(5.478)	(5.944)
	R&D $expenditure_t$ (E)	-0.023	-0.015	-0.014	-0.016	-0.014
		(0.024)	(0.022)	(0.021)	(0.020)	(0.021)
	Current $ratio_t$ (F) (unobserved slack)	-0.335+	-0.324+	-0.281	-0.280	-0.309
		(0.190)	(0.194)	(0.192)	(0.192)	(0.194)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.049	0.045	0.053	0.051	0.074
		(0.040)	(0.035)	(0.035)	(0.035)	(0.046)
IV	The ultimate cash flow $rights_t$		2.602	0.946	1.005	1.388
			(1.680)	(1.012)	(0.990)	(1.208)
	Separation between cash flow and voting $rights_t$ (A)			-0.723	-0.945	-1.328
				(0.672)	(0.688)	(0.813)
Interactions	(A) X (B)				0.289	
					(0.402)	
	(A) X (C)					0.827
						(1.090)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	100.3	102.0	101.8	102.4	98.12
	AR(2)	0.477	0.452	0.390	0.446	0.738
	Wald chi-squared statistic	259.6	279.2	275.0	281.3	294.8

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)/control rights

Table A7. Arellano-Bond GMM estimates for Tobins' Q[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.230	-0.245	-0.345	-0.252	-0.260
		(0.187)	(0.182)	(0.217)	(0.187)	(0.232)
	$Sales_t$	-0.098	-0.071	-0.089	-0.013	0.024
		(0.249)	(0.235)	(0.283)	(0.231)	(0.185)
	Advertising $expenditure_t$	-18.544	-18.081	-14.419	-18.100	-8.209
		(13.968)	(13.853)	(16.047)	(14.105)	(12.211)
	Capital $expenditure_t$	2.059**	1.874*	2.092*	2.157**	1.689*
		(0.750)	(0.786)	(0.861)	(0.781)	(0.755)
Stewards vs. Agents	Family $manager_t$ (B)	0.141	0.163	0.040	-0.016	0.016
		(0.200)	(0.202)	(0.215)	(0.195)	(0.124)
	Business group $performance_t$ (C)	0.026	0.184	0.283	0.230	0.210
		(0.224)	(0.206)	(0.228)	(0.211)	(0.232)
capital market efficiency	Analysts $coverage_t$ (D)	16.231*	15.937*	18.316**	14.571*	16.620**
		(6.306)	(6.213)	(6.762)	(5.924)	(5.914)
	R&D $expenditure_t$ (E)	-0.007	-0.006	-0.011	-0.013	-0.011
		(0.020)	(0.020)	(0.022)	(0.020)	(0.015)
Internal	Current $ratio_t$ (F) (unobserved slack)	-0.311+	-0.304	-0.364***	-0.315+	-0.326**
		(0.186)	(0.192)	(0.090)	(0.191)	(0.107)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.026	0.055	0.040	0.046	0.021
		(0.018)	(0.037)	(0.028)	(0.033)	(0.017)
	The ultimate cash flow $rights_t$	1.039	1.343	1.551	1.382	0.715
		(1.051)	(1.190)	(1.206)	(0.927)	(0.891)
IV	Separation between cash flow and voting $rights_t$ (A)	-1.421+	-1.246	-1.577+	-1.122	-1.463*
		(0.734)	(0.776)	(0.870)	(0.771)	(0.642)
Interactions	(A) X (B)					0.542
						(0.401)
	(A) X (C)					-0.070
						(0.911)
	(A) X (D)	1.716				4.743
		(2.382)				(3.032)
	(A) X (E)		-0.037			-0.024
			(0.043)			(0.031)
	(A) X (F)			-0.882***		-0.722**
				(0.202)		(0.253)
	(A) X (G)				0.054	0.023
					(0.105)	(0.070)
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	91.59	94.03	95.17	99.86	94.22
	AR(2)	0.758	0.724	0.621	0.640	0.605
	Wald chi-squared statistic	276.9	278.9	287.8	289.3	341.3

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)/control rights

Table A8. Arellano-Bond GMM estimates for market-to-book ratio[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.128	-0.123	-0.142	-0.095	-0.118
		(0.110)	(0.108)	(0.106)	(0.113)	(0.109)
	$Sales_t$	-0.278	-0.163	-0.216	0.117	-0.163
		(0.592)	(0.547)	(0.572)	(0.451)	(0.541)
	Advertising $expenditure_t$	-36.091	-31.386	-33.223	-28.996	-30.514
		(31.280)	(29.131)	(29.735)	(25.931)	(28.395)
	Capital $expenditure_t$	4.095**	3.898**	3.631*	2.577+	3.591**
		(1.455)	(1.406)	(1.461)	(1.384)	(1.373)
Stewards vs. Agents	Family $manager_t$ (B)	0.992*	0.602	0.638+	0.605*	0.210
		(0.434)	(0.376)	(0.379)	(0.280)	(0.322)
	Business group $performance_t$ (C)	1.013	0.588	0.578	0.330	0.895
		(0.753)	(0.528)	(0.454)	(0.392)	(0.553)
Internal capital market efficiency	Analysts $coverage_t$ (D)	38.627**	31.587*	31.151*	27.721**	28.736*
		(14.350)	(12.794)	(12.589)	(10.665)	(11.896)
	R&D $expenditure_t$ (E)	-0.065	-0.048	-0.039	-0.046	-0.050
		(0.045)	(0.040)	(0.041)	(0.038)	(0.038)
	Current $ratio_t$ (F) (unobserved slack)	-0.389*	-0.375+	-0.386+	-0.303	-0.331+
		(0.193)	(0.198)	(0.197)	(0.195)	(0.197)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.144*	0.148*	0.162*	0.154**	0.200**
		(0.060)	(0.058)	(0.066)	(0.053)	(0.071)
IV	The ultimate cash flow $rights_t$		6.776*	4.349+	2.921	3.893
			(3.396)	(2.476)	(2.263)	(2.530)
	Separation between cash flow and voting $rights_t$ (A)			-2.483+	-2.250+	-2.213
				(1.356)	(1.241)	(1.392)
Interactions	(A) X (B)				1.242	
					(0.926)	
	(A) X (C)					0.834
						(1.781)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	95.86	98.18	88.94	101.0	95.50
	AR(2)	0.155	0.206	0.315	0.251	0.300
	Wald chi-squared statistic	184.1	212.2	221.0	229.8	235.0

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)/control rights

Table A8. Arellano-Bond GMM estimates for market-to-book ratio[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.119	-0.141	-0.173	-0.112	-0.083
		(0.106)	(0.105)	(0.121)	(0.109)	(0.130)
	$Sales_t$	-0.223	-0.230	-0.194	-0.097	-0.022
		(0.553)	(0.496)	(0.574)	(0.504)	(0.391)
	Advertising $expenditure_t$	-31.223	-28.321	-25.272	-28.925	-14.320
		(27.929)	(27.355)	(30.815)	(27.452)	(23.090)
	Capital $expenditure_t$	3.353*	3.107*	3.463*	3.523*	2.632+
		(1.405)	(1.492)	(1.381)	(1.402)	(1.343)
Stewards vs. Agents	Family $manager_t$ (B)	0.741+	0.798*	0.593	0.223	0.157
		(0.398)	(0.392)	(0.382)	(0.333)	(0.234)
	Business group $performance_t$ (C)	0.201	0.543	0.687	0.499	0.461
		(0.401)	(0.395)	(0.458)	(0.443)	(0.454)
Internal capital market efficiency	Analysts $coverage_t$ (D)	31.470*	33.456**	35.144**	27.376*	30.109**
		(12.677)	(12.046)	(12.475)	(11.792)	(10.085)
	R&D $expenditure_t$ (E)	-0.029	-0.025	-0.037	-0.033	-0.027
		(0.039)	(0.037)	(0.040)	(0.038)	(0.028)
	Current $ratio_t$ (F) (unobserved slack)	-0.364+	-0.368+	-0.462***	-0.380*	-0.382***
		(0.190)	(0.198)	(0.097)	(0.193)	(0.079)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.152*	0.162*	0.125*	0.143**	0.118***
		(0.061)	(0.066)	(0.061)	(0.047)	(0.025)
IV	The ultimate cash flow $rights_t$	3.326	4.258+	4.537+	4.146*	2.697
		(2.375)	(2.533)	(2.543)	(2.015)	(1.795)
	Separation between cash flow and voting $rights_t$ (A)	-2.530+	-1.913	-2.244	-2.507+	-2.773*
		(1.441)	(1.277)	(1.460)	(1.346)	(1.290)
Interactions	(A) X (B)					1.076
						(0.738)
	(A) X (C)					-0.506
						(1.649)
	(A) X (D)	5.437				7.872
		(5.638)				(6.196)
	(A) X (E)		-0.099			-0.035
			(0.076)			(0.052)
	(A) X (F)			-1.288***		-0.998***
				(0.226)		(0.246)
	(A) X (G)				-0.318+	-0.366**
					(0.166)	(0.122)
	Observations	559	559	559	559	559
	Number of firms	115	115	115	115	115
	Hansen J statistic	103.2	95.87	96.32	94.10	95.73
	AR(2)	0.336	0.242	0.194	0.302	0.275
	Wald chi-squared statistic	244.2	215.9	361.8	260.7	411.0

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as (control rights-cash flow rights)/control rights

Table A9. Arellano-Bond GMM estimates for ROA[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.092	-0.041	-0.002	-0.029	-0.028
		(0.072)	(0.068)	(0.064)	(0.065)	(0.070)
	$Sales_t$	0.063***	0.064***	0.064***	0.065***	0.059***
		(0.014)	(0.014)	(0.012)	(0.013)	(0.012)
	Advertising $expenditure_t$	-0.842	-0.829	-0.560	-0.489	-0.624
		(0.514)	(0.505)	(0.511)	(0.535)	(0.520)
	Capital $expenditure_t$	-0.023	-0.027	-0.046	-0.019	-0.015
		(0.061)	(0.060)	(0.059)	(0.057)	(0.054)
Stewards vs. Agents	Family $manager_t$ (B)	0.033*	0.024	0.034*	0.037*	0.015
		(0.016)	(0.016)	(0.015)	(0.014)	(0.013)
	Business group $performance_t$ (C)	-0.021	-0.011	-0.013	-0.005	-0.007
		(0.021)	(0.018)	(0.016)	(0.016)	(0.025)
Internal capital market efficiency	Analysts $coverage_t$ (D)	0.642	0.431	0.763	0.652	0.758
		(0.530)	(0.535)	(0.506)	(0.518)	(0.481)
	R&D $expenditure_t$ (E)	-0.001	-0.000	-0.000	-0.000	-0.001
		(0.002)	(0.001)	(0.001)	(0.001)	(0.001)
	Current $ratio_t$ (F) (unobserved slack)	-0.008	-0.007	-0.004	-0.004	-0.005
		(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
	Debt-to-equity $ratio_t$ (G) (financial slack)	-0.008*	-0.007+	-0.008*	-0.006*	-0.006*
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
IV	The ultimate cash flow $rights_t$		0.275*	0.343**	0.261*	0.260*
			(0.135)	(0.114)	(0.125)	(0.112)
	Separation between cash flow and voting $rights_t$ (A)			0.043**	0.029**	0.027*
				(0.014)	(0.011)	(0.013)
Interactions	(A) X (B)				-0.006	
					(0.011)	
	(A) X (C)					0.001
						(0.038)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	558	558	558
	Number of firms	115	115	114	114	114
	Hansen J statistic	103.8	104.5	98.30	93.42	105.0
	AR(2)	0.126	0.205	0.217	0.166	0.188
	Wald chi-squared statistic	248.4	223.6	232.6	225.0	263.9

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as log(control rights-cash flow rights)

Table A9. Arellano-Bond GMM estimates for ROA[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.042	-0.048	-0.044	-0.048	-0.074
		(0.075)	(0.069)	(0.069)	(0.069)	(0.066)
	$Sales_t$	0.062***	0.067***	0.062***	0.063***	0.060***
		(0.013)	(0.014)	(0.012)	(0.012)	(0.012)
	Advertising $expenditure_t$	-0.785+	-0.578	-0.698	-0.693	-0.418
		(0.438)	(0.516)	(0.500)	(0.520)	(0.479)
	Capital $expenditure_t$	-0.030	-0.030	-0.027	-0.032	0.007
		(0.055)	(0.061)	(0.053)	(0.056)	(0.051)
Stewards vs. Agents	Family $manager_t$ (B)	0.029*	0.033*	0.028+	0.028+	0.018
		(0.015)	(0.016)	(0.015)	(0.015)	(0.012)
	Business group $performance_t$ (C)	0.002	-0.011	-0.016	-0.009	0.012
		(0.015)	(0.017)	(0.016)	(0.017)	(0.026)
Internal capital market efficiency	Analysts $coverage_t$ (D)	0.818	0.679	0.794	0.772	0.856+
		(0.510)	(0.507)	(0.532)	(0.498)	(0.487)
	R&D $expenditure_t$ (E)	-0.001	-0.001	-0.001	-0.001	-0.001
		(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
	Current $ratio_t$ (F) (unobserved slack)	-0.009+	-0.008	-0.007+	-0.008	-0.004
		(0.005)	(0.005)	(0.004)	(0.005)	(0.004)
	Debt-to-equity $ratio_t$ (G) (financial slack)	-0.006+	-0.008*	-0.007*	-0.006*	-0.005
		(0.003)	(0.003)	(0.003)	(0.003)	(0.003)
IV	The ultimate cash flow $rights_t$	0.307*	0.349**	0.282*	0.342***	0.196
		(0.125)	(0.111)	(0.130)	(0.100)	(0.129)
	Separation between cash flow and voting $rights_t$ (A)	0.031*	0.035*	0.030+	0.039**	0.023*
		(0.014)	(0.014)	(0.016)	(0.015)	(0.011)
Interactions	(A) X (B)					-0.007
						(0.010)
	(A) X (C)					0.000
						(0.038)
	(A) X (D)	-0.037				-0.044
		(0.080)				(0.075)
	(A) X (E)		0.000			-0.000
			(0.001)			(0.001)
	(A) X (F)			-0.004		-0.009*
				(0.004)		(0.004)
	(A) X (G)				0.002	0.001
					(0.003)	(0.003)
	Observations	558	558	558	558	558
	Number of firms	114	114	114	114	114
	Hansen J statistic	92.94	96.65	404.2	95.51	91.46
	AR(2)	0.178	0.213	0.205	0.203	0.149
	Wald chi-squared statistic	220.4	208.4	239.9	243.6	253.8

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as log(control rights-cash flow rights)

Table A10. Arellano-Bond GMM estimates for Tobin's Q[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.269	-0.250	-0.189	-0.201	-0.219
		(0.179)	(0.187)	(0.204)	(0.199)	(0.195)
	$Sales_t$	-0.103	-0.032	0.166	0.178	0.028
		(0.281)	(0.249)	(0.226)	(0.213)	(0.258)
	Advertising $expenditure_t$	-21.745	-18.827	-14.964	-15.268	-17.485
		(16.421)	(14.792)	(13.009)	(13.233)	(14.493)
	Capital $expenditure_t$	2.329**	2.218**	1.818*	1.623*	2.108**
		(0.751)	(0.765)	(0.794)	(0.772)	(0.798)
Stewards vs. Agents	Family $manager_t$ (B)	0.259	0.082	0.352+	0.258+	-0.055
		(0.232)	(0.199)	(0.190)	(0.153)	(0.187)
	Business group $performance_t$ (C)	0.391	0.185	0.031	0.002	0.264
		(0.323)	(0.236)	(0.243)	(0.243)	(0.264)
capital market efficiency	Analysts $coverage_t$ (D)	19.141**	15.921*	11.111*	11.665*	11.691*
		(7.282)	(6.300)	(5.453)	(5.134)	(5.670)
	R&D $expenditure_t$ (E)	-0.023	-0.015	-0.016	-0.018	-0.017
		(0.024)	(0.022)	(0.020)	(0.019)	(0.021)
Internal	Current $ratio_t$ (F) (unobserved slack)	-0.335+	-0.324+	-0.284	-0.288	-0.296
		(0.190)	(0.194)	(0.191)	(0.189)	(0.192)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.049	0.045	0.054	0.048	0.072
		(0.040)	(0.035)	(0.037)	(0.036)	(0.048)
IV	The ultimate cash flow $rights_t$		2.602	0.504	1.043	1.188
			(1.680)	(1.121)	(1.115)	(1.191)
	Separation between cash flow and voting $rights_t$ (A)			-0.293	-0.250	-0.344+
				(0.203)	(0.178)	(0.203)
Interactions	(A) X (B)				0.129	
					(0.108)	
	(A) X (C)					0.132
						(0.317)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	558	558	558
	Number of firms	115	115	114	114	114
	Hansen J statistic	100.3	102.0	104.0	94.92	100.2
	AR(2)	0.477	0.452	0.546	0.439	0.728
	Wald chi-squared statistic	259.6	279.2	273.1	289.5	287.4

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as log(control rights-cash flow rights)

Table A10. Arellano-Bond GMM estimates for Tobins' Q[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.209	-0.226	-0.286	-0.234	-0.216
		(0.196)	(0.194)	(0.209)	(0.191)	(0.220)
	$Sales_t$	-0.018	0.056	-0.003	0.049	0.053
		(0.242)	(0.238)	(0.255)	(0.253)	(0.184)
	Advertising $expenditure_t$	-17.473	-16.915	-14.568	-17.027	-11.142
		(14.038)	(13.726)	(15.159)	(14.459)	(12.663)
	Capital $expenditure_t$	2.122**	2.049*	2.138*	2.119**	1.740*
		(0.762)	(0.818)	(0.868)	(0.820)	(0.764)
Stewards vs. Agents	Family $manager_t$ (B)	0.123	0.141	0.060	0.094	-0.018
		(0.189)	(0.194)	(0.202)	(0.208)	(0.124)
	Business group $performance_t$ (C)	0.040	0.189	0.182	0.218	-0.064
		(0.230)	(0.216)	(0.229)	(0.242)	(0.223)
Internal capital market efficiency	Analysts $coverage_t$ (D)	13.568*	11.937*	14.628*	12.256*	14.726**
		(5.791)	(5.678)	(5.886)	(5.900)	(5.289)
	R&D $expenditure_t$ (E)	-0.009	-0.013	-0.011	-0.013	-0.010
		(0.019)	(0.021)	(0.020)	(0.021)	(0.016)
	Current $ratio_t$ (F) (unobserved slack)	-0.303	-0.302	-0.314*	-0.314+	-0.296*
		(0.185)	(0.191)	(0.132)	(0.190)	(0.137)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.028	0.057	0.053	0.047	0.019
		(0.020)	(0.039)	(0.035)	(0.035)	(0.020)
	The ultimate cash flow $rights_t$	1.111	1.415	0.353	1.189	0.478
		(1.208)	(1.263)	(1.163)	(1.098)	(1.022)
IV	Separation between cash flow and voting $rights_t$ (A)	-0.321	-0.299	-0.473+	-0.330	-0.237
		(0.210)	(0.208)	(0.254)	(0.222)	(0.165)
Interactions	(A) X (B)					0.044
						(0.101)
	(A) X (C)					-0.422
						(0.278)
	(A) X (D)	0.105				0.463
		(0.711)				(1.101)
	(A) X (E)		-0.001			-0.006
			(0.010)			(0.007)
	(A) X (F)			-0.220*		-0.177*
				(0.106)		(0.089)
	(A) X (G)				0.013	-0.005
					(0.018)	(0.015)
	Observations	558	558	558	558	558
	Number of firms	114	114	114	114	114
	Hansen J statistic	97.42	101.9	99.34	104.9	82.43
	AR(2)	0.715	0.687	0.859	0.713	0.771
	Wald chi-squared statistic	291.5	294.2	254.0	278.6	322.6

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as log(control rights-cash flow rights)

Table A11. Arellano-Bond GMM estimates for market-to-book ratio[a,b,c,d]

		(1)	(2)	(3)	(4)	(5)
Controls	ROA_{t-1}	-0.128	-0.123	-0.122	-0.090	-0.086
		(0.110)	(0.108)	(0.107)	(0.112)	(0.107)
	$Sales_t$	-0.278	-0.163	-0.059	0.219	-0.058
		(0.592)	(0.547)	(0.573)	(0.441)	(0.531)
	Advertising $expenditure_t$	-36.091	-31.386	-30.215	-25.765	-29.186
		(31.280)	(29.131)	(29.464)	(26.106)	(28.226)
	Capital $expenditure_t$	4.095**	3.898**	3.778*	2.896*	3.715**
		(1.455)	(1.406)	(1.499)	(1.389)	(1.360)
Stewards vs. Agents	Family $manager_t$ (B)	0.992*	0.602	0.687+	0.619*	0.242
		(0.434)	(0.376)	(0.382)	(0.299)	(0.333)
	Business group $performance_t$ (C)	1.013	0.588	0.563	0.333	0.637
		(0.753)	(0.528)	(0.532)	(0.472)	(0.585)
Internal capital market efficiency	Analysts $coverage_t$ (D)	38.627**	31.587*	25.017*	23.264*	23.914*
		(14.350)	(12.794)	(11.988)	(9.608)	(11.233)
	R&D $expenditure_t$ (E)	-0.065	-0.048	-0.045	-0.052	-0.051
		(0.045)	(0.040)	(0.040)	(0.036)	(0.038)
	Current $ratio_t$ (F) (unobserved slack)	-0.389*	-0.375+	-0.382+	-0.334+	-0.319+
		(0.193)	(0.198)	(0.196)	(0.192)	(0.192)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.144*	0.148*	0.171**	0.150**	0.191**
		(0.060)	(0.058)	(0.061)	(0.051)	(0.066)
IV	The ultimate cash flow $rights_t$		6.776*	3.731+	3.423	3.372
			(3.396)	(2.265)	(2.216)	(2.285)
	Separation between cash flow and voting $rights_t$ (A)			-0.732+	-0.514	-0.627+
				(0.420)	(0.364)	(0.357)
Interactions	(A) X (B)				0.325	
					(0.236)	
	(A) X (C)					0.012
						(0.555)
	(A) X (D)					
	(A) X (E)					
	(A) X (F)					
	(A) X (G)					
	Observations	559	559	558	558	558
	Number of firms	115	115	114	114	114
	Hansen J statistic	95.86	98.18	99.70	102.5	89.46
	AR(2)	0.155	0.206	0.420	0.245	0.375
	Wald chi-squared statistic	184.1	212.2	220.8	253.0	224.0

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as log(control rights-cash flow rights)

Table A11. Arellano-Bond GMM estimates for market-to-book ratio[a,b,c,d] (continued)

		(6)	(7)	(8)	(9)	(10)
Controls	ROA_{t-1}	-0.088	-0.112	-0.145	-0.098	-0.029
		(0.107)	(0.109)	(0.117)	(0.106)	(0.122)
	$Sales_t$	-0.113	-0.030	-0.116	-0.008	0.039
		(0.533)	(0.503)	(0.524)	(0.527)	(0.381)
	Advertising $expenditure_t$	-28.738	-27.545	-25.707	-27.732	-16.446
		(27.564)	(26.744)	(29.728)	(28.045)	(23.267)
	Capital $expenditure_t$	3.644**	3.462*	3.626*	3.586*	2.539*
		(1.404)	(1.498)	(1.418)	(1.438)	(1.249)
Stewards vs. Agents	Family $manager_t$ (B)	0.717*	0.730+	0.581	0.486	0.096
		(0.351)	(0.372)	(0.363)	(0.376)	(0.245)
	Business group $performance_t$ (C)	0.258	0.537	0.528	0.521	0.007
		(0.446)	(0.490)	(0.520)	(0.534)	(0.512)
Internal capital market efficiency	Analysts $coverage_t$ (D)	26.572*	25.268*	29.940**	23.802*	26.576**
		(11.376)	(11.016)	(11.151)	(11.517)	(9.126)
	R&D $expenditure_t$ (E)	-0.031	-0.032	-0.033	-0.037	-0.021
		(0.036)	(0.038)	(0.037)	(0.038)	(0.027)
	Current $ratio_t$ (F) (unobserved slack)	-0.349+	-0.369+	-0.385***	-0.375+	-0.335**
		(0.186)	(0.196)	(0.115)	(0.191)	(0.116)
	Debt-to-equity $ratio_t$ (G) (financial slack)	0.148**	0.164**	0.142**	0.115*	0.087*
		(0.054)	(0.060)	(0.055)	(0.053)	(0.034)
IV	The ultimate cash flow $rights_t$	3.054	3.896+	2.566	4.387*	3.061
		(2.437)	(2.335)	(2.161)	(2.126)	(1.949)
	Separation between cash flow and voting $rights_t$ (A)	-0.656	-0.630	-0.784+	-0.638	-0.363
		(0.408)	(0.388)	(0.401)	(0.407)	(0.261)
Interactions	(A) X (B)					0.114
						(0.182)
	(A) X (C)					-0.882+
						(0.518)
	(A) X (D)	0.624				0.977
		(1.730)				(2.117)
	(A) X (E)		-0.013			-0.016
			(0.018)			(0.014)
	(A) X (F)			-0.342*		-0.262*
				(0.138)		(0.106)
	(A) X (G)				-0.046	-0.083*
					(0.046)	(0.037)
	Observations	558	558	558	558	558
	Number of firms	114	114	114	114	114
	Hansen J statistic	99.77	95.60	100.4	94.51	81.38
	AR(2)	0.407	0.378	0.582	0.381	0.375
	Wald chi-squared statistic	243.2	226.1	237.5	247.3	306.3

a. robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. year dummies included, but not reported
d. separation measured as log(control rights-cash flow rights)

STUDY2: OWNERSHIP STRUCTURE AND FAMILY BUSINESS GROUP RESTRUCTURING IN EMERGING ECONOMIES: THE CASE OF CHAEBOLS

ABSTRACT

This study examines how ownership structure determines restructuring strategy of family business groups in emerging economies. Drawing on the corporate diversification literature, I posit that related as well as vertically integrated business portfolio reduces risk. Then, I argue that family ownership is positively associated with restructuring that increases relatedness and vertical integration of business portfolio because the family as a large shareholder has strong incentive to reduce risk and variability. In addition, I propose that in the presence of institutional and market pressure for restructuring towards related and vertically de-integrated business portfolio, separation of cash flow and control rights motivates the family to actively respond to this pressure. Because the family is typically unable to conform to the institutional pressure for good corporate governance, it may attempt to neutralize this pressure by responsively conforming to the other institutional pressure, which I believe pertains to "substitution response" (Okhmatovskiy & David, 2012). I empirically test these hypotheses in the context of large family business groups in Korea. The results show that family ownership is positively associated with restructuring that increases relatedness and vertical integration of business portfolio and that the separation of cash flow and control rights is negatively associated with restructuring that increases vertical integration.

Keywords: Family Ownership, Separation of Cash Flow and Control Rights, Restructuring, Institutional Pressure, Family Business Group

INTRODUCTION

Business group restructuring increasingly attracts scholarly attention (Chung & Luo, 2008; Hoskisson, Johnson, Tihanyi, & White, 2005; Kim, Hoskisson, Tihanyi, & Hong, 2004a; Ramaswamy et al., 2012). This is due to the ubiquity of business groups which are confronted with strong institutional pressure for restructuring. Business group literature underscores that business groups enjoy economic advantage of various kinds *under conditions of* "institutional voids and market imperfection" (Chang & Choi, 1988; Khanna & Palepu, 2000a; Khanna & Rivkin, 2001; Leff, 1978). According to this logic, it is no surprise to observe that business groups prevail in emerging economies that satisfy such conditions. Relatively overlooked, however, is the fact that emerging economies are not at a standstill but undergoing market-oriented transitions which lead to advancement of institutions and correction of market failures (Chung & Luo 2008; Filatotchev et al. 2003; Hoskisson et al. 2005; Hermelo & Vassolo 2010). The strong foothold of business groups continues to be undermined accordingly. For survival, business groups need to actively respond to these transitions. One way to accomplish that aim is restructuring of business portfolio that enables them to get aligned with changing environments (Chung & Luo, 2008; Hoskisson et al., 2005; Ramaswamy et al., 2012).

Unfortunately, however, we know relatively little about the mechanism through which business group restructuring occurs in emerging economies (Chung & Luo, 2008; Peng & Delios, 2006). Further, although there are a few studies on this, they are mostly conceptual pieces accompanied by several anecdotes or case studies (e.g., Carney, 2004; Hoskisson et al., 2005; Khanna & Palepu, 1999; Kim et al., 2004a); there is a paucity of empirical evidence from which any systematic inference can be drawn. This study seeks to remedy this deficiency. Toward that end, I begin by centering attention on family business groups and their ownership structure in part because most business groups in emerging economies are family business groups and in part because they represent a very unique ownership pattern (Almeida & Wolfenzon, 2006b; Masulis et al., 2011). Granted, a few scholars attempt to link ownership structure of family business groups to their restructuring strategy (e.g., Chung & Luo, 2008; Hoskisson et al., 2005). Nonetheless, they fail to take into account one unique but cardinal feature of their ownership structure: separation of cash flow and control rights. This is surprising, given that this separation is observed in virtually all family business groups in emerging economies (Almeida & Wolfenzon, 2006b; La Porta et al., 1999) and argued to hold profound implications for their behavior and performance

(Bebchuk et al., 2000; Masulis et al., 2011; Morck et al., 2005; Morck & Yeung, 2003). Through the complementary lenses of agency and institutional theory (cf. Hoskisson, Eden, Lau, & Wright, 2000), I examine how this unique ownership pattern impinges upon business group restructuring strategy.

In so doing, I consider two fundamental dimensions in the analysis of business group restructuring strategy: relatedness and vertical integration of business portfolio. Prior literature on the business group restructuring has focused lopsidedly on relatedness of business portfolio (Hoskisson et al., 2005; Kim et al., 2004a). And it has remained relatively silent on the subject of vertical boundaries (Khanna & Palepu, 1999 is an exception). This neglect is also unfortunate, in view of the fact that traditional literature on corporate boundary decisions (e.g., Besanko, Dranove, Shanley, & Schaefer, 2010; Jones & Hill, 1988; Klein, 2005; Leiblein, Reuer, & Dalsace, 2002; Robins, 1993) as well as business group literature (e.g.,Chang & Choi, 1988; Khanna & Yafeh, 2007; Li, Ramaswamy, & Petitt, 2006; Young et al., 2008) has treated the vertical boundaries as another elemental dimension. Relateldy, recent studies reveal that change in vertical scope of business groups could have non-trivial implications for their

behavior and performance (Chang, 2003b; Khanna & Yafeh, 2007; Li et al., 2006). Then, research can slip by neglect of vertical dimension in the analysis of restructuring strategy.

This study redresses these two oversights in the analysis of business group restructuring by bringing directly into the spotlight (1) separation of cash flow and control rights and (2) vertical boundaries. I offer a theoretical framework to explain the relationship between ownership structure and restructuring strategy of family business groups in emerging economies. In keeping with corporate diversification literature, I posit that related as well as vertically integrated business portfolio reduces risk. Then, I argue that family ownership is positively associated with restructuring that increases relatedness and vertical integration because the family, as a large shareholder, has strong incentive to reduce risk and variability. In addition, I propose that in the presence of institutional pressure for restructuring towards related and vertically de-integrated business portfolio, the separation of cash flow and control rights forces the family to actively conform to this institutional pressure. Because the family is typically unable to respond to the institutional pressure for good corporate governance (Carney, 2008b; Chang, 2006), it may

attempt to neutralize the pressure by responsively conforming to the other institutional pressure, which I believe has close connection with "balance tactics" (Oliver, 1991) or "substitution response" (Okhmatovskiy & David, 2012). I found support for our argument in the context of Korea.

Korea provides an interesting setting for the inquiry into the linkage from the unique pattern of ownership structure to restructuring strategy of family business groups. Large family business groups in Korea, also known as Chaebols, control their affiliates through direct equity stakes in tandem with indirect pyramidal stakes and cross-shareholding, bringing about a significant level of separation between cash flow and control rights (Almeida et al., 2011; Claessens et al., 2002; La Porta et al., 1999). In addition, Chaebols have been induced as well as forced to restructure their business portfolios by *coercive (regulative) pressure* from government agencies, regulatory bodies as well as *normative pressure* from NGOs, mass media, and the like (Carney, 2004; DiMaggio & Powell, 1983; Scott, 2001). For example, business groups are exempt from many regulations like limiting investments into their subsidiaries when they diversify into related industries (Sung & Kim, 2008). This is important since our theory

builds considerably on institutional pressure. In the following sections, I develop our hypotheses and test our arguments using a sample of top 30 Chaebols during periods from 2002 to 2010. Our results suggest (1) that family ownership (i.e., cash flow rights) is positively associated with restructuring that increases relatedness of business portfolio and vertical integration and (2) that separation of cash flow and control rights is negatively associated with restructuring that increases vertical integration.

THEORY AND HYPOTHESES

Corporate Restructuring in the United States

The decade of the 1980s observed a massive wave of corporate restructuring that swept through the United States (Bethel & Liebeskind, 1993; Davis, Diekmann, & Tinsley, 1994; Johnson, 1996). Defined as an organizational attempt to get aligned with changing environments by developing "a new configuration of the lines of business" (Bowman & Singh, 1993:6), corporate restructuring has occupied one of the central spots in the corporate strategy literature. While a variety of antecedents of corporate restructuring have been identified, they can be classified into three broad categories. The first category is environmental changes. Relaxed anti-trust regulations, the advent of junk bond market,

shareholder activism, increasing global competition, and changing mental model of corporation are considered to ignite corporate restructuring activity (Davis et al., 1994; Johnson, 1996). The second category is weak governance. The attempt to correct over-diversification arisen from weak governance is thought to give rise to corporate restructuring. Managers have incentive to diversify even beyond the optimal level in order to reduce risk and enlarge private benefits (Amihud & Lev, 1981). When governance is put in place, such inefficiency will be corrected through corporate restructuring (Bethel & Liebeskind, 1993). The last category is over-diversification or poor performance resulting from it. Restructuring is considered to be initiated to rationalize such inefficiencies (Hoskisson, Johnson, & Moesel, 1994; Markides, 1992, 1995; Ravenscraft & Scherer, 1991).

While informative, these antecedents are not directly applicable to the business group restructuring in emerging economies in that the contexts for restructuring substantially differ from those for the U.S. Among others, two aspects merit further consideration. First, such economies undergo fast-paced advancement of institutions and correction of market failure which the U.S. did not experience during the 1980s. The consequent market-wide institutional changes hold

unique implications for restructuring strategy, calling for more research from the institutional theory perspective (Hoskisson et al., 2005). For instance, whereas market failure and its correction have a considerable bearing upon change in vertical boundaries, vertical restructuring has not received as much attention in the literature (Li et al., 2006). Second, emerging economies are characterized by unique corporate governance practices (Shleifer & Vishny, 1997). The traditional principal-agent conflicts observed in the U.S. are overshadowed by principal-principal conflicts in these economies (Morck et al., 2005; Shleifer & Vishny, 1997). This is important because they may hold profound implications for restructuring strategy in emerging economies (Young et al., 2008). Even so, this linkage has been relatively neglected (Chung & Luo, 2008 is an exception). On balance, it seems safe to conclude that the literature on corporate restructuring derived mainly from the U.S context is not sufficient for the understanding of restructuring in emerging economies. With this in mind, I identify the antecedents of restructuring and elaborate on their mechanisms in such economies in the following.

Business Group Restructuring in Emerging Economies

Business groups are ubiquitous around the world particularly outside the U.S. and the United Kingdom and take control of a

substantial portion of industrial output; their economic significance is widely acknowledged (Carney et al., 2011; Granovetter, 1994; Khanna & Yafeh, 2007; Yiu et al., 2007). Literature has attributed such prevalence of business groups to various benefits they beget, especially in emerging markets. Internal markets hypothesis, *inter alia*, has been the most dominant lens through which business groups are understood. Its central tenet is that business groups are a sort of *functional substitutes* for underdeveloped external markets arisen from institutional voids that feature emerging economies (Granovetter, 2005). It underscores that business groups allow their affiliate firms to circumvent such disadvantageous institutional voids and market imperfection via internal markets (Khanna & Palepu, 2000a, b; Khanna & Rivkin, 2001; Leff, 1978). Notably, a corollary of this logic is that the size of the attached benefits is proportional to the extent to which the institutional voids of the focal economy remain unfilled (Carney, 2008a; Khanna & Rivkin, 2001); in other words, for a business group to enjoy the argued advantages, institutions need to stay under-developed.

However, the reality is that institutions in emerging economies increasingly face pressure for change or upgrade (Hermelo & Vassolo,

2010; Park, 2007; Ramaswamy et al., 2012). Literature documents that institutional contexts of emerging economies are undergoing market-oriented transitions (Chung & Luo, 2008; Filatotchev, Piga, & Dyomina, 2003; Hermelo & Vassolo, 2010; Hoskisson et al., 2005; Park, 2007; Park & Kim, 2008); both formal and informal rules of the game, macro-level transaction cost structure, and the extent of market competition are becoming similar to those of developed economies, albeit gradually (Chung & Luo, 2008; Hermelo & Vassolo, 2010; Hoskisson et al., 2005; North, 1990). Such market-oriented institutional transitions in turn curtail the argued various benefits and thereby pressure business groups to reorient strategies in such a way as to better align themselves to the evolving institutional environments. Quite relevant in this regard is the strategy involving restructuring of business portfolio (Chung & Luo, 2008; Hoskisson et al., 2005; Ramaswamy et al., 2012).

Prior literature has conceptualized restructuring as an organizational attempt to get aligned with changing environments by developing "a new configuration of the lines of business" (Bowman & Singh, 1993:6). According to an evolutionary perspective combined with institutional theory, business groups are constantly confronted

with strong pressure for restructuring as institutional contexts of emerging economies experience market-oriented transitions (Chang, 1996; Chung & Luo, 2008; Hermelo & Vassolo, 2010; Hoskisson et al., 2005; Kim et al., 2004a). Specifically, business groups, as a repository of knowledge asset, need to engage in continual search and selection of novel, promising businesses and divestment of non-performing businesses to create and enhance synergies realized across businesses and eventually to better adapt themselves to the changing institutional environments (Bowman & Singh, 1993; Chang, 1996; Choe & Roehl, 2007; Kogut & Zander, 1992; Nelson & Winter, 1982). To assess the impact of market-oriented transitions on restructuring strategy, I first delve into market failure and its ramifications.

Research suggests that institutional conditions shape a corporation's horizontal and vertical strategies, depending on types of market failure (Li et al., 2006). In particular, it is argued that under conditions of product market failure vertically integrated business portfolios are favored since internalization of value chain activities enlarges internal product market through which transaction costs and uncertainties can be reduced pervasive in imperfect product markets of emerging economies (Li et al., 2006; Williamson, 1985). Thanks to

their larger scope that spans various vertical chain activities, vertically integrated business portfolios can fill institutional voids and substitute inchoate product markets to a larger degree than vertically unrelated ones can (Chang, 2003b). On the other hand, in the presence of capital market failure unrelated business portfolios are preferred since they bring about flexibility and stability of internal capital market (Kim et al., 2004a; Li et al., 2006). In under-developed capital market, it is overly costly to raise fund from the external capital market due to shortage of capital. Thus, a superior strategy would be to rely on the internal capital market, the funds of which come from the pool of retained earnings of affiliate firms. However, if affiliate firms operate in related industries, their income streams move in unison and thereby likely to fluctuate (Lubatkin & Chatterjee, 1994); then, the internal capital market may not work properly when needed. Thus, unrelated business portfolios are a better choice[8].

The foregoing discussion indicates that under conditions of institutional voids and market failure, internal markets enjoy competitive edge over external markets in mobilizing and allocating

[8] As capital markets develop, this advantage disappears. In the context of Korea, our empirical setting, in which capital markets have impressively advanced, this logic might not hold. In the theory and hypotheses section, I develop alternative logic in association with family ownership.

resources. Unrelated and vertically integrated business portfolios are favored primarily because they render more effective the functioning of internal product and capital markets. Empirical evidences seem to support this view: most business groups in emerging economies have unrelated and vertically integrated business portfolios (Chang, 2003b; Chang & Choi, 1988; Chang & Hong, 2002; Khanna & Palepu, 1999; Khanna & Yafeh, 2007). It is worth noting, however, that as institutions advance and markets develop, the above claim will not necessarily hold true because the competitive edge of internal markets over external markets diminishes, eventually reversing itself in well-developed institutions and markets (Kim et al., 2004a; Peng, 2003). Taken together, it stands to reason that market-oriented transitions would push business groups to engage in restructuring that increases relatedness and decreases vertical integration of business portfolios (Hoskisson et al., 2005).

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Figure B1 is about here

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The figure B1 shows the trends of relatedness and vertical integration of business portfolios of top 30 Chaebols. Consistent with

the preceding discussion, the trend of horizontal relatedness of Chaebols' business portofolio measured as (1) related portion of entropy index divided by total entropy index and (2) horizontal relatedness based on Robins and Wiersema (1995) and Fan and Lang (2000) continuously increases while vertical relatedness based on Fan and Lang (2000) decreases[9].

Institutional pressure: Normative vs. Coercive (regulative)

A closer scrutiny reveals that such pressure for restructuring potentially derives from two different sources, internal or external. The internal source would be performance below social and historical expectation (Markides, 1992, 1995). According to learning theory, performance feedback structures decision makers' actions (Cyert & March, 1963). Especially when performance falls short of social and historical aspiration level, decision makers are willing to take corrective and even riskier actions such as strategic reorientation, focal market change, introduction of new product, process, and procedures (Baum, Rowley, Shipilov, & Chuang, 2005; Lant, Milliken, & Batra, 1992). Then, the declining performance arisen from institutional advancement may motivate business groups to restructure their

[9] Further details including operationalization about these measures will be presented in the data and method section.

business portfolios in the direction of disrupting the *status quo* even if doing so involves non-negligible risks and uncertainties (Carney, 2004). However, there are two necessary conditions for this to occur. First, the negative performance signal must be accurate as well as large enough for the decision makers of the business groups to put it in their cognitive processes. Second, business groups should attribute to the disappointing performance exactly to their present business portfolios. Since business groups are in most cases gigantic in their size and consequently their inner-workings are quite complicated, performance feedback is presumably too noisy and therefore too distant a cause. Taking this into account, I argue that rather a more powerful source may be external one—institutional pressure.

A spate of research has emphasized the importance of institutional environments because they enable and constrain their constituencies' actions and ultimately determine their survival (Scott, 2003). "[C]omposed of cultural-cognitive, normative, and regulative elements that, together with associated activities and resources, provide stability and meaning to social life" (Scott, 2001:48), institutions are thought to be generated by the two major collective actors—governmental units and professional groups (Scott, 2003). In Korea, in

the aftermath of the Asian financial crisis, the two major collective actors together with such international organizations as World Bank and international monetary fund (IMF) which provided bailout funds, reached a general consensus that related and vertically less integrated business portfolios are preferable in Korea (Carney, 2008a; Sung & Kim, 2008). Thus, governments and regulatory bodies have reshuffled the policies, law, and regulations in an attempt to induce as well as undergird such moves or restructuring in that direction, establishing coercive (or regulative) pressure (Sung & Kim, 2008). Similarly, professional groups including mass media, non-governmental organization, academicians, practitioners, and investors have provided support for the moves (citations needed), shaping the normative pressure (Carney, 2008a). To attain legitimacy for survival, business groups should conform to these institutional pressures. I believe these institutional pressures are strong catalysts for business group restructuring that increases relatedness and decreases vertical integration of business portfolio.

In relation, I envisage that in the Korean context a much stronger pressure may be placed upon vertical direction. There are two reasons for this: the concerns about (1) economic concentration and (2)

tunneling by Chaebols. Indeed, the Korean economy has been dominated by Chaebols (Chang, 2003b). According to one source, the sales of top 10 Chaebols surpassed 80% of Korea's GDP as of Aug, 2012 (*Hankyoreh*, Aug 28, 2012). At the same time that such concentration of wealth and resources in the country is not socially desirable (Almeida & Wolfenzon, 2006a), intra-group transactions based upon vertical integration has worsened the economic concentration by Chaebols (Chang, 2003b). Further, such vertically integrated portfolios enable Cheabols to increase intra-group transactions, raising the concern about tunneling defined as "the transfer of resources out of a company to its controlling shareholder" (Carney, 2008a; Johnson et al., 2000b:22). Consequently, there is quite an elevated pressure for vertical de-integration of Chaebols' business portfolios. As a result, Samsung group and others, for example, had to divest the businesses of maintenance repair and operations (MRO) and system integration (SI). Similarly, SK, LG, and Hyundai Group announced that they will open their internal markets to non-affiliate firms (*Yonhap news*, Apr 18, 2013). Thus, I contend that restructuring in the vertical direction is confronted with a stronger institutional pressure in the Korean context.

Ownership Structure and Restructuring Strategy in Chaebols

Although such institutional pressures for restructuring are at work, I argue that business groups may be heterogeneous in responding to the pressures depending on their ownership structure. Chaebols in general consist of a few upper-level (quasi-) holding companies and numerous successive layers of lower-level affiliate firms, exhibiting pyramidal structure (Claessens, Djankov, & Xu, 2000; Khanna & Yafeh 2007; La Porta, Lopez-de-Silanes, & Shleifer, 1999). The traditional explanation of such pyramidal structure concerns financial efficiency in acquiring business group control (Almeida et al., 2011; Almeida & Wolfenzon, 2006). The hierarchical extension of ownership relations enables the family to avoid acquiring an excessive number of direct ownership stakes (or cash flow rights) that consume a considerable amount of financial resources (Almeida & Wolfenzon 2006). By creating successive indirect ownership relations instead and diluting the financial capital for control with external finance, the family can dramatically economize on the financial capital required for the control of entire business groups (La Porta et al. 1999). The resulting ownership structure represents a radical separation of cash flow and control rights which is widely observed in business groups

around the world (Almeida & Wolfenzon, 2006b). And the family serves not only as a large shareholder (i.e., principal) but also a manager (i.e., agent), exhibiting the Principal-Principal-Agent relations (Young et al., 2008). In what follows, I delve into the impact of cash flow rights (ownership) and the separation on restructuring strategy.

Family Ownership (Cash Flow Rights)

Literature on family firms recognizes that family ownership is "concentrated in a single firm, unlike shareholders who invest across multiple firms," and therefore "their risks and returns are tied to a single asset, the family firm" (Gomez-Mejia et al., 2011:665). In this regard, the family is a sort of *large-concentrated shareholder* that "bear[s] excessive risk" (Shleifer & Vishny, 1997:758). Not surprisingly, then, the family will have strong incentive to actively engage in strategies aimed at decreasing risk or variability of the firm (Anderson & Reeb, 2003b; Gomez-Mejia et al., 2011; Gomez-Mejia et al., 2010). One relevant strategy in the business group setting may be diversification of business portfolio. By definition, a business group consists of multiple businesses, total risk of which amounts to total variability of all income streams from the businesses. Mathematically, total variability may be calculated from the following formulas:

$$\mathrm{E}(r_p) = \sum_{i=1}^{n} w_i \mathrm{E}(r_i) \qquad \cdots (1)$$

$$\sigma_{\mathrm{p}}^2 = \sum_{i=1}^{n} \sum_{j=1}^{n} w_i w_j \mathrm{Cov}(r_i, r_j)$$

$$= \sum_{i=1}^{n} w_i^2 \sigma_i^2 + \sum_{i \le i < j \le n} w_i w_j \mathrm{Cov}(r_i, r_j) \qquad \cdots (2)$$

Where r_i represents the return of income stream from business i; w_i represents the weight of income stream from business i; σ_i^2 represents the variance of income stream from business i; $\mathrm{E}(\cdot)$ represents the expectation operator; and $\mathrm{Cov}(\cdot)$ represents the covariance operator.

The two equations in tandem suggest that given an expected return of a business portfolio, diversification decreases total variability of the portfolio, i.e., the income streams from the businesses. More revealing is the fact that the extent of total risk or variability is negatively associated with covariance (or relatedness) among the income streams from businesses. This indicates that unrelated business portfolio is better than related business portfolio at reducing risk or variability. Consequently, it is inferred that the family may prefer unrelated business portfolio over related business portfolio to reduce risk. Further, since such tendency increases with its ownership (i.e., the

amount of its wealth put at risk or risk bearing) in the business group, family ownership (i.e., cash flow rights) in the business group may be negatively associated with restructuring that increases related portion of business portfolio. Chung and Luo (2008) among others provided a corroborative evidence for this reasoning in the context of Taiwan business groups.

While this reasoning sounds plausible, it is important to notice that it is premised upon an implicit assumption that diversification of business portfolio corresponds exactly to that of stock portfolio with regard to the mechanisms for influencing risk. For instance, it views the goals of, and roles assumed by, corporate (or business group) managers as the same as the goals of, and roles assumed by, security managers; hence, the income streams remain intact even after diversification. Yet prior studies pointed out that this assumption does not hold true (Chatterjee & Lubatkin, 1990; Lubatkin & Chatterjee, 1994; Lubatkin & Rogers, 1989; Montgomery & Singh, 1984). In stark contrast to security managers who typically do not participate in management of individual companies, corporate managers directly influence each business's income stream by managing each business, coordinating activities among the businesses, allocating resources across the

businesses, and promoting resource sharing and transfer in such a way as to maximize profit and reduce variability at the corporate (i.e., business group) level (Hoskisson, Hill, & Kim, 1993; Stein, 1997; Williamson, 1985). The upshot is that variance of each income stream as well as covariance among them, not to mention its return, cannot stay still in the context of corporate diversification and that such changes in underlying income streams are more pronounced in related diversification.

An impressive body of literature has mounted the case that related business portfolio may reduce not just systematic but unsystematic risk, in comparison to unrelated business portfolio. Montgomery and Singh (1984) showed that beta, or the sensitivity to economy-wide fluctuation, of related diversifiers is much smaller than that of unrelated diversifiers. They explained this finding by drawing on market power, capital structure, and capital intensity (Subrahmanyam & Thomadakis, 1980). Similarly, Lubatkin & O'Neil (1987) argued that systematic risk of related diversifiers is lower than that of unrelated diversifiers on the grounds that related business portfolio confers competitive advantage and ultimately market power. They found support for the argument. Barton (1988) also provided

corroborative results for this finding. Even after controlling for market power and capital structure, he found that the systematic risk of related diversifiers is lower than that of unrelated diversifiers, implying that there are other explanations for it. Finally, Lubatkin and Chatterjee (1994) showed that related diversifiers can reduce unsystematic risk as well to a larger degree than unrelated ones can. The underlying logic is that related diversifiers exclusively enjoy synergies derived from tangible and intangible and competitor interrelationships. The synergies enable related diversifiers to achieve a strong competitive foothold and thereby dampen unsystematic fluctuation of income streams arisen from competitive market as well as input and output markets of each business. Technically speaking, variance and covariance in equation (2) in related business portfolio decreases more than those in unrelated business portfolio thanks to the smaller firm-specific movement or fluctuation[10]. On balance, it is concluded that related business portfolio could reduce risk more than unrelated business portfolio could, as opposed to the perspective of the modern portfolio theory.

[10] Notice that covariance between two income streams, r_i and r_j, is defined as $\mathrm{E}\left[\left(r_i - E(r_i)\right)\left(r_j - E(r_j)\right)\right]$. Thus, the covariance is determined not only by (1) co-movement between the two income streams but by (2) business-specific movements of each income stream. The smaller the business-specific movement, the smaller the covariance, *ceteris paribus*.

In keeping with this literature, I assert that the family prefers related diversification over unrelated diversification with a view to reducing risk. Notable here is the fact that the family serves not only as a large shareholder but as a corporate (or business group) manager. If the family is merely a large shareholder similar to security managers, related diversification might not reduce risk because large shareholders typically do not involve in every detail of management of business portfolio requisite to achieving synergy among businesses. It is because the family serves also as a manager that related diversification could reduce risk more than unrelated diversification. Further, because such preference becomes stronger as its ownership or risk bearing in the business group increases, I hold that family ownership (i.e., cash flow rights) in the business group will be positively associated with restructuring that increases related portion of business portfolio. In addition, the institutional pressure supports restructuring towards related business portfolio. Therefore, I hypothesize:

H1a: Family ownership (cash flow rights) is positively associated with business group restructuring that increases the relatedness of business portfolio.

The other strategy relevant to reducing risk pertains to vertical integration. Transaction cost economics views vertical integration as a

way to reduce risk and uncertainty especially from demand and supply conditions (Helfat & Teece, 1987; Williamson, 1991). Two factors are germane to understanding of the relation between risk and vertical integration. One is asset specificity. Asset specificity determines the amount of quasi-rents and thereby likelihood of opportunistic behaviors from the transaction party (Klein, Crawford, & Alchian, 1978). The other is market uncertainty. As market uncertainties unfold, transaction costs increase because it becomes more difficult to stipulate all the contractual terms under all possible eventualities (Williamson, 1991, 2002). These two factors in combination suggest that "transaction costs covary with market movements" (Chatterjee, Lubatkin, & Schoenecker, 1992:141). By extension, it stands to reason that vertical integration decreases systematic (or market) risk by reducing transaction costs that co-move with market fluctuations (Chatterjee et al., 1992; Helfat & Teece, 1987; Lubatkin & Chatterjee, 1994).

Notably, the role of vertical integration in reducing risk and uncertainty becomes greater in the context of emerging economies. Typically, emerging economies do not have legal infrastructure in place to resolve any contractual conflicts; transactional parties are less protected from opportunistic behaviors. In addition, quasi-rent of an

asset, defined as “the excess of its value over its value in its next best use” (Klein et al., 1978:298) increases due to market failure that reduces the value of the asset in its second best use. Both contribute to increase in transaction costs in emerging economies when compared with developed economies. Worse yet, emerging economies are subject to unceasing market fluctuations by virtue of their vulnerability to external shocks. In other words, reducing systematic risk becomes a strategic imperative. So, the benefit from risk reduction through vertical integration is likely to be greater than in developed economies.

On top of this, by increasing vertical integration, the family will be able to increase the capacity of cross-subsidization through internal product markets (Chang, 2003b). Thus, Khanna and Yafeh argue “vertically integrated groups can adjust prices and volumes of intra-group transactions more easily to assist member firms” (2005:319). Furthermore, as a side effect, vertically related business portfolio enables to a larger degree the family to increase its own wealth via self-dealings or tunneling through internal transactions (Bae, Kang, & Kim, 2002; Bertrand, Mehta, & Mullainathan, 2002; Hoskisson et al., 2005). Even though cross-subsidization and tunneling do not increase shareholder wealth, they are evidently in the interest of the family that

desires to decrease risks and increase its own wealth. These incentives motivate the family to resist the institutional pressure for restructuring towards vertically de-integrated business portfolio.

Taking all these into consideration, I argue that the family prefers vertically integrated business portfolio to reduce risk. And because such preference becomes stronger as its ownership or risk bearing in the business group increases, I hold that family ownership (i.e., cash flow rights) in the business group will be positively associated with restructuring that increases vertical integration of business portfolio. Thus, I hypothesize:

H1b: Family ownership (cash flow rights) is positively associated with business group restructuring that increases vertical integration of business portfolio.

Separation of Cash Flow and Control Rights

Prior literature has regarded the radical separation of cash flow and control rights observed in the family business groups as performance destructive because it inevitably engenders violation of the "one share-one vote" principle (Adams & Ferreira, 2008; Grossman & Hart, 1988; Harris & Raviv, 1988). As studies have shown, the violation of one share-one vote principle is socially undesirable and

holds negative implications for a firm's strategic choices and behaviors (Grossman & Hart, 1988; Harris & Raviv, 1988), on the grounds that it distorts incentive structure via unfair redistribution of power among shareholders (Burkart & Lee, 2008). Fundamentally, it regards the separation as not just arisen from the controlling shareholders' self-interested motive for extracting private benefits of control at the expense of other minority shareholders. The separation is also conceived of as encouraging as well as enabling such self-serving behaviors by rendering them entrenched from capital market discipline; therefore, the controlling shareholders' self-seeking behaviors are likely to be unchecked (Almeida & Wolfenzon, 2006b; Morck et al., 2005). So viewed, the separation of cash flow and control rights may assist the family in resisting the institutional pressure for restructuring as Chung and Luo (2008) theorized.

A closer scrutiny, however, reveals that this may not be the case. Apparently, although entrenchment by the separation of ownership structure can shield the family from capital market discipline, it cannot shield it from the institutional pressure from government agencies, regulatory bodies, professional groups, and mass media which are thought to set out rules and norms (DiMaggio & Powell, 1983; Scott,

2001). In view of this, I argue that on the contrary, such a radical separation draws an appreciable amount of attention from the government units, regulatory bodies, and media (Dyck, Volchkova, & Zingales, 2008), bringing about another institutional pressure with regard to corporate governance. In fact, it is well known that as institutions advance and competition in the product and capital market heightens, there is also strong (isomorphic) pressure for good corporate governance (Carney, 2004, 2008a; Cuomo, Zattoni, & Valentini, 2013; Yoshikawa & McGuire, 2008; Zattoni & Cuomo, 2008). Consequently, business groups exhibiting a radical separation of cash flow and control rights is now confronting the institutional pressure for good corporate governance, rather than enjoying entrenchment from capital market pressure. And this institutional pressure exists over and above the institutional pressure for restructuring.

However, to conform to institutional pressure for good corporate governance means to gravitate towards one share-one vote principle or reduce the separation of cash flow and control rights. And it requires the family to purchase direct cash flow rights of its affiliate firms, which may necessitate an astronomical amount of money. Thus, it is virtually impossible to conform to the institutional pressure without

control loss. In turn, any control loss is argued to severely reduce the family's socio-emotional wealth or emotional satisfaction (Burkart et al., 2003; Schulze et al., 2001) and thereby is not a viable option. Worse, business groups exhibiting a radical separation of cash flow and control rights have to contend with the institutional pressure for restructuring in tandem. Under conditions of these overlapping institutional pressures, the best way might be to compromise them through a partial conformity with at least one of the expectations that are viable to meet (Oliver, 1991). In other words, business groups with a radical separation might want to symbolically signal that they are in fact good citizens of the society by actively conforming to the institutional pressure for restructuring as an alternative (Carney, 2004). Thus, I hypothesize:

H2a: Separation of cash flow and control rights is positively associated with business group restructuring that increases the relatedness of business portfolio.

H2b: Separation of cash flow and control rights is negatively associated with business group restructuring that increases vertical integration of business portfolio.

DATA AND METHODS

Data

I collect the business group data from the Korea Fair Trade Commission (hereafter KFTC). KFTC designates large business groups or Chaebols each year and mandates these groups to report their insider shareholdings (e.g., family shares), intra-group cross-ownership data, group-level financial information, etc. otherwise unavailable (see Almeida et al., 2011 for detail). These data are made available on its website (http://groupopni.ftc.go.kr/index.jsp). To calculate , I constructed yearly adjacency matrices for the business group equity networks by merging the node of family to the intra-group cross-ownership data provided by KFTC.

I gathered firm-level financial information from the database developed by the Korea Investors Services (KIS). The KIS database, which is equivalent to the COMPUSTAT in the U.S., provides a comprehensive set of firm-level information including company profiles and financial data on virtually all the Korean firms. Its credibility and reliability have been well established and are sufficiently evidenced by its wide use by the well-known studies on Korean Chaebols (Chang, 2003; Chang & Hong, 2000, 2002; Siegel, 2007). Even so, to lessen the concern about potentially poor auditing practice in Korea, I included in our sample only "listed firms" and

"statutory audited firms" whose asset size is over 10 billion wons primarily for the integrity of financial data; only they are legally subject to external auditing (Joh, 2003). Further, following prior study (Kim, Hoskisson, & Wan, 2004b), financial firms were excluded due to their qualitative difference. our data consisted of 29-33 Chaebols. Since I constructed unbalanced panel data from 2003 to 2010, our final data consisted of 137-178 Chaebol-year observations.

Dependent Variable

Restructuring towards related business portfolio. Our dependent variable is based upon entropy intex (Jacquemin & Berry, 1979). I operationalize this as growth in related portion of entropy index from time *t-1* to time *t* (Hoskisson, Hitt, Johnson, & Moesel, 1993; Jacquemin & Berry, 1979; Khanna & Palepu, 2000a). And related portion of entropy index is calculated as the entropy index at the SIC 4 digit level minus the entropy index at the SIC 2 digit level. Algebraically, this is represented as:

$$\Delta\left[\sum_{i\in I} P_i \ln\frac{1}{P_i} - \sum_{s\in S} P_s \ln\frac{1}{P_s}\right]$$

where Δ represents the growth operator between time *t* and *t-1*, P_i represents the asset portion of *i* industry at the SIC 4 digit level, P_s represents the asset portion of *s* industry at the SIC 2 digit level, I represents the universal set of the SIC 4 digit level industries, and S represents the universal set of the SIC 2 digit level industries. I elect to use growth instead of difference to control for the base effect. Thus, this measure is bounded between 0 and 1, inclusive. Then, I conducted a natural logarithmic transformation on the value to reduce the undesirable statistical effect of the abnormal behaviors of the measure occurring when its denominator becomes close to zero. It is worth noting that this measure captures gradual, continuous changes more effectively than the measures based on the numbers of acquisition and divestiture does (cf. Chung & Luo, 2008).

Restructuring towards vertically integrated portfolio. I operationalized this as change in the degree of vertical integration from time *t-1* to time *t*. For this I employed two measures. First, I measured this by using internal business transaction (Chang, 2003b). To measure forward vertical integration, I computed sales to affiliate firms deflated by total sales at the affiliate firm level then weighted averaged them at the business group level; to measure backward vertical integration, I

computed purchase from affiliate firms deflated by total sales at the affiliate firm level and then weighted averaged them at the business group level (Chang, 2003b; Chang & Hong, 2000).

Second, I measured this by drawing on vertical relatedness devised by Fan and Lang (2000). For this, I first calculated a matrix of inter-industry vertical relatednesses whose elements are operationalized as:

$$V_{ij} = \frac{v_{ij} + v_{ji}}{2}$$

Where v_{ij} is the won value of industry *i*'s output required to produce industry *j*'s total output divided by the won value of industry *j*'s total output.

Stated differently, v_{ij} implies "the [won] value of industry *i*'s output required to produce 1 [won]'s worth of industry *j*'s output" (Fan & Lang, 2000:633). Accordingly, this measure is intuitively interpreted as the possibility of two industries being vertically integrated. In the business group context, this measure also indicates the opportunity of internal transactions among businesses in two industries. Then, as before, using this matrix of inter-industry vertical relatedness, I calculate vertical relatedness of a Chaebol's business portfolio:

$$\frac{\sum VR_{ij}}{N-1} = \frac{\sum(P_i V_{ij} + P_j V_{ij})}{N-1}$$

where VR_{ij} is a sales-weighted measure of vertical relatedness between industry i and j, P_i represents the sales portion of the focal Chaebol in the industry i, V_{ij} represents a vertical relatedness between industry i and j, and N is the number of industries in which the focal Chaebol is active.

Thus, vertical relatedness of a Chaebol's business portfolio indicates the average of inter-industry vertical relatednesses of all possible pairs in the business portfolio weighted by sales shares. This measure theoretically lies in the closed interval of (0,1). Then, I calculated restructuring in the vertical direction as change in this relatedness from time *t-1* to time *t*, as before. I use the input and output matrix in the year of 2005 provided by Bank of Korea.

Independent variables

Family cash flow rights. To allow for indirect cash flow rights through any possible cross-holding chains or paths over and above direct cash flow rights, I used ultimate cash flow rights as in Almeida and colleagues (2011). To calculate this, I first constructed cross-shareholding matrices or adjacency matrices (Wasserman & Faust,

1994) every year for the Chaebol on the basis of the intra-group stock ownership data provided by KFTC. Then, I used the following formula (cf. Bonacich, 1987):

$$u' = f'(I + A + A^2 + A^3 + \cdots) = f'(I - A)^{-1}$$

Where u is the 1 X N vector of ultimate cash flow rights of the family for N firms, f is the 1 X N vector of the family's direct cash flow rights of N firms, I is the N X N identity matrix, and A is the cross-shareholding matrix.

Finally, I calculated family cash flow rights at the business group level by averaging this firm-level ultimate family cash flow rights weighted by total equity of each affiliate firm.

Separation of cash flow and control rights. Prior literature has employed various measures. Unfortunately, such practice has hindered this stream of literature from evolving by making it difficult to legitimately compare the findings across studies (see Adams & Ferreira, 2008 for a review). To address this concern, I used three different measures for this variable. First, I operationalized this as "wedge" or control rights minus cash flow rights of the family for the focal firm (Claessens et al., 2002; Joh, 2003; La Porta et al., 2002). To allow for

indirect cash flow rights through any possible cross-holding chains or paths over and above direct cash flow rights, I used ultimate cash flow rights as in Almeida and colleagues (2011).

Second, since the above measure, wedge, might not allow for the non-linearity of our theorized relation (Adams & Ferreira, 2008), I alternatively employed "voting rights leverage" which is defined as control rights divided by ultimate cash flow rights (Lemmon & Lins, 2003; Lins, 2003). To reduce the undesirable statistical effect of the abnormal behaviors of the measure occurring when its denominator becomes close to zero, I conducted a natural logarithmic transformation on the control rights leverage. Finally, I used another measure for separation of cash flow and control rights used by Mitton (2002). This measure was operationalized as control rights minus ultimate cash flow rights divided by control rights. For the matrix calculation, I used MATLAB R2012b (The MathWorks, 2012). All measures were calculated at the business group level by averaging the firm-level control rights and cash flow rights weighted by total equity of each affiliate firm.

Control Variables

To control for the effect of business group size on performance, I controlled for ***total asset*** at the business group level. I aggregated sales of affiliate firms and then conducted a natural logarithmic transformation on the aggregate. I also controlled for two ***organizational slack*** variables (Greve, 2003). One is *unabsorbed slack* which is operationalized as current assets divided by current liabilities. This variable is often called ***liquidity*** (Chang & Hong, 2000). The other is *potential slack* which is measured as debt-to-equity ratio. This variable is also called ***leverage*** and captures the amount of external capital potentially available. According to the literature, a high debt-to-equity ratio of a business group signifies financial distress, non-trivial likelihood of bankruptcy, and excessive borrowing (Myers, 1977; Myers & Majluf, 1984), which in turn limits the business group's ability to access external capital market (Froot, Scharfstein, & Stein, 1994). I also control for two business group-level resources possibly influencing restructuring: ***advertisement*** **and** ***R&D expenditure***. If these variables co-vary with the independent variable, omitting these variables may engender biased parameter estimates. They are operationalized as advertising expenditure and R&D expenditure divided by sales, respectively. Finally, I controlled for ***total entropy*** which I operationalized the degree of diversification as the total

entropy index calculated at the SIC 4-digit level (Jacquemin & Berry, 1979; Khanna & Palepu, 2000a; Palepu, 1985). I also control for ***foreign ownership,*** given that foreign investors are a major source of institutional pressure for restructuring strategy. I calculated the foreign investors' cash flow rights at the business group level by averaging the firm-level foreign investors' cash flow rights weighted by total equity of each affiliate firm. I also control for ***prior performance.*** Prior performance has been regarded as one antecedent of restructuring (Hoskisson et al., 2005; Johnson, 1996). I operationalized this as return on asset at the group level. Specifically, I operationalized the return at the firm level as yearly earnings before interests and taxes (EBIT) because it effectively captures operating profitability without being influenced by financial structure and tax (Chang & Choi, 1988; Chang & Hong, 2000; Chu, 2004). Then, I subtracted industry median of EBIT at the SIC 2 digit level from each affiliate firm's EBIT to allow for industry heterogeneity. Then, I aggregated returns and assets of all the affiliate firms. Finally, I divided the aggregate return by the aggregate asset. Finally, I inserted ***year dummies*** to control for macroeconomic shocks.

Estimation Technique. For test of hypotheses, I used the fixed-effects panel estimator (Baltagi, 2008; Greene, 2008; Wooldridge, 2002). Specifically, I modeled restructuring as follows:

$$C_{it} = X'_{it}\beta + \mu_i + \varepsilon_{it}$$

Where C_{it} represents restructuring for Chaebol *i* at time *t*, X_{it} represents a vector of covariates for Chaebol *i* at time *t*, μ_i represents unobserved heterogeneity (or fixed-effects) for Chaebol *i*, and ε_{it} represent disturbances.

As is well known, the least squares estimator generates inconsistent estimates in the panel data setting if fixed-effects (or unobserved heterogeneity) are correlated with covariates or more formally $\mathrm{Cov}(X_{it}, \mu_i) \neq 0$. Presumably, our covariates may be associated with unobserved heterogeneity at the business group level such as group culture, social identity, management philosophy, and the like. To control for unobserved heterogeneity, I adopted the fixed-effects panel estimator. This estimator effectively controls for within-group unobserved heterogeneity (i.e., fixed effects) through mean-deviation operation (Greene, 2008). While the fixed-effects estimator is consistent but not efficient because of decrease in observations during

the mean-deviation operation. If unobserved heterogeneity is statistically uncorrelated with covariates, or more formally, $\mathrm{Cov}(X_{it}, \mu_i) = 0$, then random-effects model would be a better choice. I tested this possibility based on Hausman specification test. The null hypothesis that fixed-effects estimates are equivalent to random-effects estimates was strongly rejected at $p<0.001$. So, I decided to stick to the fixed-effects estimator. Another concern arisen from this specification is that in the presence of serial correlation of the disturbance term, ε_{it}, standard errors from the fixed-effects estimator become biased or inefficient. I checked this possibility by using xtserial command in STATA 11 (Drukker, 2003). According to the test statistic developed by Wooldridge (2002), I could not reject the null hypothesis that there is no serial correlation; thus, there is less concern about serial correlation. To control for heteroscedasticity, I report robust standard errors. For the empirical analysis, I use xtreg command in STATA 11 (StataCorp., 2009).

RESULTS

Table 2-1 presents descriptive statistics and correlations for all variables used in this analysis. To examine the multi-collinearity issue, I calculated variance inflation factors (VIFs) for all models. The largest

VIF was far below 10, with mean VIF around 2. Thus, there is less concern about multi-collinearity.

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Table B1 is about here

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Table B2 is about here

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Table B2 presents the fixed-effects estimates for restructuring towards related business portfolio. Model 1 inserts only control variables. Consistent with a behavioral theory of the firm, significant and negative coefficient of debt-to-equity ratio suggests that restructuring that increases related business portfolio may be initiated only when sufficient organizational buffer exists (Argote & Greve, 2007). More interestingly, advertising expenditure is positively associated with restructuring towards related business portfolio, potentially revealing Chaebols' intention to achieve economies of scale and scope in advertising resources. Model 2 inserts family ownership, one of our focal variables. I find support for hypothesis 1a at $p<0.05$. This result is consistent in all models. Models 3 to 6 insert four

different measures of separation of cash flow and control rights. The results provide no support for hypothesis 2a.

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Table B3 is about here

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Table B3 presents the fixed-effects estimates for restructuring towards vertically integrated business portfolio in the backward direction. Model 1 inserts only control variables. Quite revealing is that restructuring toward vertically integrated business portfolio in the backward direction is driven by organizational technical and marketing resources proxied by R&D expenditure and advertising expenditure (Chatterjee & Wernerfelt, 1991). Model 2 inserts one of our focal variables, family ownership. According to the result, hypothesis 1b is not supported. Models 3 to 6 insert separation of cash flow and control rights. The results provide strong support hypothesis 2b at $p<0.01$. As discussed above, the family might feel institutional pressure for good corporate governance on top of the institutional pressure for vertical de-integration (Chang, 2006) and seek to neutralize the former institutional pressure by actively conforming to the latter institutional pressure. I

interpret this behavior as “balance tactics” (Oliver, 1991) or “substitution response” (Okhmatovskiy & David, 2012).

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Table B4 is about here

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Table B4 presents the fixed-effects estimates for restructuring towards vertically integrated business portfolio in the forward direction. Model 1 inserts only control variables. Similar to the results in the backward direction, restructuring toward vertically integrated business portfolio in the backward direction turns out to be driven by organizational technical and marketing resources proxied by R&D expenditure and advertising expenditure. Diverging from the prior findings in the backward direction, restructuring that increases forward vertical integration is associated with product market uncertainty and concentration ratio. Consistent with transaction cost economics and industrial organizational literature, forward vertical integration appears to be pursued to reduce transaction costs arisen from market uncertainty and to achieve market power (Besanko et al., 2010; Chatterjee et al., 1992). Model 2 inserts family ownership, one of our focal variables. I found support for hypothesis 1b at $p<0.05$. This

means that family prefers to pursue vertical integration as a way to reduce risk. Models 3 to 6 insert separation of cash flow and control rights on top of family ownership. Consistently, the results provide support hypothesis 2b.

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Table B5 is about here

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Table B5 presents the fixed-effects estimates for restructuring towards vertically integrated business portfolio based on a new measure of vertical relatedness developed by Fan and Lang (2000). Model 1 inserts only control variables. The result paints a somewhat different picture. Model 2 inserts family ownership. I found strong support for hypothesis 1b at $p<0.01$. Models 3 to 6 insert separation of cash flow and control rights in addition to family ownership. The results provide no support for hypothesis 2b. Overall, I can safely say that the results provide support for hypothesis 1a, 1b, and 2b.

DISCUSSION AND CONCLUSION

It is widely known that family business groups prosper in emerging economies featured by institutional void and market failure and that they are increasingly confronted with non-negligible pressure

for restructuring derived from market oriented transition (Hoskisson et al., 2005). Unfortunately, however, we know relatively little about what determines restructuring of family business groups in such economies (Chung & Luo, 2008). While there is a plethora of literature on corporate restructuring in the context of the U.S. (Johnson, 1996), it is less helpful in understanding restructuring of family business groups since the contexts for restructuring substantially differ from those for the U.S. This study endeavors to fill this theoretical lacuna by drawing attention to the factors unique to the economies: institutional pressure and ownership structure. Specifically, I theorize and empirically show how the unique ownership structure, i.e., family ownership as well as separation of ownership and control right, is associated with business group restructuring along the dimensions of relatedness and vertical integration of business portfolio in the presence of severe market forces and institutional pressure. These findings have several theoretical implications.

Theoretical Contributions

First, this study contributes to the corporate restructuring literature in two ways. For one, most studies on corporate restructuring are based on the U.S. setting in which the traditional principal-agent relations prevail (Davis et al., 1994; Johnson, 1996). In the U.S.,

managers are typically not large shareholders, and the one-share-one-vote principle is not substantially violated. In such governance practices, the effect of ownership structure relates directly to the effectiveness of governance mechanisms that curb the manager's self-seeking behaviors. However, in emerging economies in which the controlling shareholder serves also as a manager, such reasoning is no longer valid. In this regard, this study extends the corporate restructuring literature by shedding light on the differing influence of ownership structure in the emerging economies.

For another, studies based on the U.S. setting has conceptualized the institutional pressure for corporate restructuring as derived from the U.S.-specific environmental factors such as changes in anti-trust policies, tax law, shareholder activism, financing tools, and the like, all of which together contributed to deinstitutionalization of the firm-as-portfolio model (Davis et al., 1994). In contrast, the main drivers for business group restructuring in emerging economies by and large comes from market forces for efficiency boosted by the advancement of institutions and correction of market failure (i.e., market forces) (Chang, 2006) together with institutional pressure for good corporate governance arisen from dispersion of global standards

of good governance (Yoshikawa & McGuire, 2008; Yoshikawa, Tsui-Auch, & McGuire, 2007). Thus, this study highlights that the unique aspect of ownership structure in emerging economies holds significantly different implications once such environmental and institutional differences are considered.

In addition, this study adds to the institutional theory perspective by examining an organization's response to institutional pressure to which the organization is unable to conform. Since Oliver's (1991) work, variance in an organization's ability to respond to institutional pressure has attracted scholarly attention. In our context, business groups have to contend with institutional pressure for performance and for good corporate governance at once. Since they are unable to meet institutional demands for good corporate governance, they may try to "shift attention away from noncompliance" (Okhmatovskiy & David, 2012:155) by actively conforming to another institutional pressure. The response of this kind is called "substitution response" (Okhmatovskiy & David, 2012). Our study offers another example of such an organizational response to overlapping institutional pressures.

Finally, this study provides an explanation as to vertical restructuring. Prior literature on the business group restructuring has focused mostly on relatedness of business portfolio (Hoskisson et al., 2005; Kim et al., 2004a). And it has remained relatively silent on the subject of vertical boundaries (Khanna & Palepu, 1999 is an exception). This study attempts to redress this imbalance by offering a new explanation with attention to ownership structure.

Figure B1. Trends in horizontal and vertical relatedness of top 30 Chaebols' business portfolios

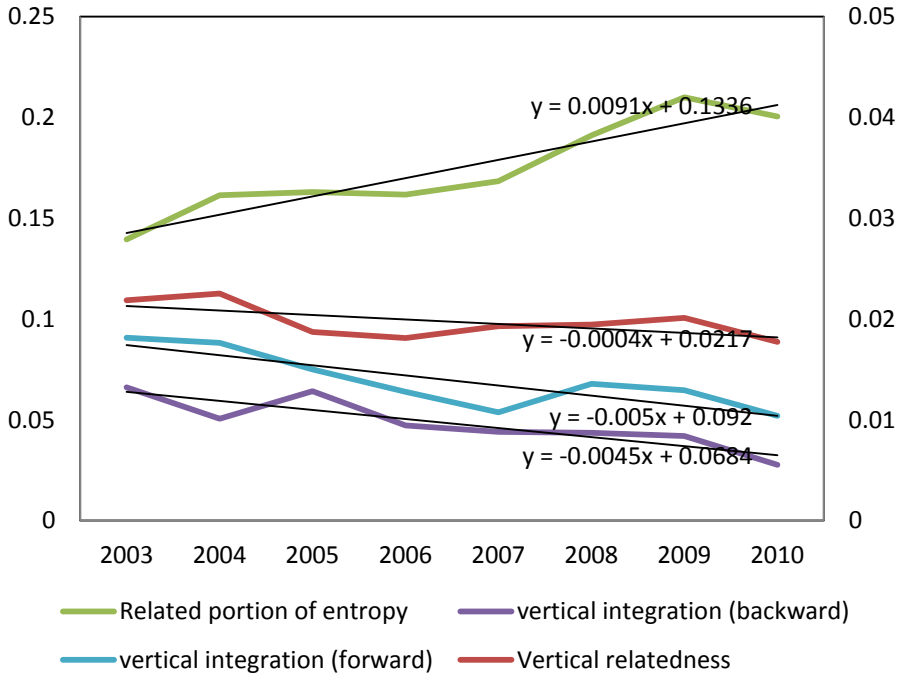

Table B1. Descriptive statistics and correlation matrix[a,b,c,d,e,f]

	Mean	S.D.	Min	Max	1	2	3	4	5	6	7	8	9
1. Restructuring into related business portfolio	0.48	0.41	0	2.24									
2. Restructuring into vertically integrated portfolio (backward)	-0.01	0.08	-0.73	0.51	0.04								
3. Restructuring into vertically integrated portfolio (forward)	0	0.06	-0.28	0.27	0.05	0.50							
4. Restructuring into vertically integrated portfolio (vertical relatedness)	-0.04	0.19	-0.84	1.11	0.04	0.13	0.12						
5. Prior performance	0.01	0.03	-0.13	0.1	0.15	0.05	0.11	0.08					
6. Total asset[a]	1.74	2.7	0.956	20.4	0.29	-0.01	-0.01	0.04	0.18				
7. Current ratio	0.79	0.45	0.14	5.3	-0.08	-0.11	-0.01	0.08	0.08	0.00			
8. Debt-to-equity ratio	1.98	3.02	0.01	31.24	-0.11	-0.06	-0.02	0.06	-0.15	-0.16	0.12		
9. R&D expenditure	0.7	0.91	-0.33	4.95	-0.09	0.09	0.13	-0.05	0.09	0.25	0.19	0.00	
10. Advertising expenditure	0.92	1.31	0.01	9.79	0.05	0.02	0.02	-0.02	0.26	-0.07	-0.09	-0.06	0.01
11. Product market uncertainty	0.19	0.08	0.08	0.62	-0.20	0.00	-0.03	-0.04	-0.05	-0.01	0.43	0.35	0.04
12. Concentration ratio (4)	0.43	0.14	0.07	0.91	0.11	0.00	-0.01	0.07	0.19	0.51	-0.26	-0.09	-0.03
13. Foreign ownership	0.16	0.15	0	0.63	-0.01	0.01	0.02	0.03	0.25	0.41	0.04	-0.24	0.37
14. Family's ownership (cash flow rights)	0.27	0.18	0.03	0.93	-0.09	0.05	0.10	0.05	0.06	-0.52	0.02	-0.05	-0.15
15. Separation[b]	0.22	0.13	0	0.84	0.25	-0.07	-0.08	-0.17	-0.11	0.25	-0.09	0.05	-0.15
16. Separation[c]	2.52	1.95	1	20.79	0.16	-0.09	-0.13	-0.25	-0.06	0.37	-0.09	0.11	0.13
17. Separation[d]	0.47	0.24	0	0.95	0.19	-0.09	-0.13	-0.16	-0.03	0.58	-0.07	0.04	0.09
18. Separation[e]	1.17	0.39	0.69	3.08	0.20	-0.09	-0.12	-0.20	-0.02	0.53	-0.08	0.06	0.17

a. in ten trillion wons
b. voting rights - the ultimate cash flow rights
c. voting rights / the ultimate cash flow rights
d. (voting rights - the ultimate cash flow rights)/voting rights
e. Log(voting rights / the ultimate cash flow rights+1)
f. Correlations of |0.141| or greater significant at $p < 0.05$ and correlations of |0.184| or greater are significant at $p < 0.01$

Table B1. Descriptive statistics and correlation matrix (continued)[a,b,c,d,e,f]

	Mean	S.D.	Min	Max	10	11	12	13	14	15	16	17
1. Restructuring into related business portfolio	0.48	0.41	0	2.24								
2. Restructuring into vertically integrated portfolio (backward)	-0.01	0.08	-0.73	0.51								
3. Restructuring into vertically integrated portfolio (forward)	0	0.06	-0.28	0.27								
4. Restructuring into vertically integrated portfolio (vertical relatedness)	-0.04	0.19	-0.84	1.11								
5. Prior performance	0.01	0.03	-0.13	0.1								
6. Total asset[a]	1.74	2.7	0.956	20.4								
7. Current ratio	0.79	0.45	0.14	5.3								
8. Debt-to-equity ratio	1.98	3.02	0.01	31.24								
9. R&D expenditure	0.7	0.91	-0.33	4.95								
10. Advertising expenditure	0.92	1.31	0.01	9.79								
11. Product market uncertainty	0.19	0.08	0.08	0.62	-0.13							
12. Concentration ratio (4)	0.43	0.14	0.07	0.91	0.09	-0.25						
13. Foreign ownership	0.16	0.15	0	0.63	0.02	-0.04	0.06					
14. Family's ownership (cash flow rights)	0.27	0.18	0.03	0.93	0.27	-0.11	-0.24	-0.38				
15. Separation[b]	0.22	0.13	0	0.84	0.05	-0.02	0.18	-0.32	-0.34			
16. Separation[c]	2.52	1.95	1	20.79	-0.07	-0.02	0.26	0.07	-0.56	0.53		
17. Separation[d]	0.47	0.24	0	0.95	-0.08	0.04	0.38	0.03	-0.76	0.75	0.73	
18. Separation[e]	1.17	0.39	0.69	3.08	-0.08	0.00	0.35	0.09	-0.71	0.66	0.92	0.93

a. in ten trillion wons
b. voting rights - the ultimate cash flow rights
c. voting rights / the ultimate cash flow rights
d. (voting rights - the ultimate cash flow rights)/voting rights
e. Log(voting rights / the ultimate cash flow rights+1)
f. Correlations of |0.141| or greater significant at $p < 0.05$ and correlations of |0.184| or greater are significant at $p < 0.01$

Table B2. The fixed-effects panel estimates for restructuring towards related business portfolio[a,b,c,d,e,f,g]

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.782	-1.402+	-1.320	-1.348	-1.702+	-1.606
	(0.755)	(0.799)	(0.777)	(0.899)	(0.857)	(0.973)
Prior performance	2.480	2.451+	2.568+	2.468+	2.443+	2.496+
	(1.484)	(1.322)	(1.307)	(1.282)	(1.332)	(1.332)
Total asset	0.018	-0.165	-0.201	-0.193	-0.183	-0.189
	(0.201)	(0.251)	(0.245)	(0.266)	(0.250)	(0.256)
Current ratio	0.205	0.243	0.227	0.247	0.240	0.246
	(0.197)	(0.196)	(0.193)	(0.196)	(0.195)	(0.197)
Debt-to-equity ratio	-0.050**	-0.029+	-0.031+	-0.026	-0.032+	-0.034+
	(0.015)	(0.015)	(0.016)	(0.023)	(0.016)	(0.018)
R&D expenditure	-0.057	-0.055	-0.067	-0.054	-0.060	-0.056
	(0.091)	(0.085)	(0.087)	(0.085)	(0.093)	(0.086)
Advertising expenditure	0.265***	0.228**	0.227**	0.227**	0.217**	0.218**
	(0.062)	(0.064)	(0.070)	(0.063)	(0.070)	(0.063)
Total entropy	-0.010	0.251	0.229	0.249	0.237	0.254
	(0.263)	(0.305)	(0.315)	(0.299)	(0.310)	(0.302)
Product market uncertainty	0.985	0.594	0.702	0.611	0.666	0.640
	(1.256)	(1.330)	(1.278)	(1.322)	(1.264)	(1.278)
Concentration ratio (4)	1.508	2.188	1.847	2.171	2.031	2.144
	(1.366)	(1.431)	(1.391)	(1.459)	(1.412)	(1.434)
Foreign ownership	-0.661	-0.304	-0.050	-0.368	-0.087	-0.260
	(0.935)	(1.042)	(0.873)	(1.013)	(0.988)	(0.968)
Family's ownership (cash flow rights)		1.282*	1.364*	1.356*	1.793**	1.658**
		(0.610)	(0.574)	(0.566)	(0.515)	(0.484)
Separation between cash flow and voting rights[c]			0.467			
			(0.423)			
Separation between cash flow and voting rights[d]				-0.002		
				(0.019)		
Separation between cash flow and voting rights[e]					0.511	
					(0.330)	
Separation between cash flow and voting rights[f]						0.134
						(0.147)
No. of observations	138	138	137	137	137	137
Number of business groups	29	29	29	29	29	29
R-squared (within)	0.259	0.290	0.297	0.290	0.297	0.292
R-squared (overall)	0.119	0.111	0.106	0.104	0.112	0.105
R-squared (between)	0.121	0.119	0.108	0.113	0.110	0.110
F statistic	19.33	46.89	77.45	37.12	42.73	56.75
corr(X,μ)	-0.811	-0.835	-0.837	-0.846	-0.826	-0.838

a. Robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. voting rights - the ultimate cash flow rights
d. voting rights / the ultimate cash flow rights
e. (voting rights - the ultimate cash flow rights)/voting rights
f. Log(voting rights / the ultimate cash flow rights+1)
g. Year dummies are included but not reported

Table B3. The fixed-effects panel estimates for restructuring towards vertically integrated business portfolio in the backward direction[a,b,c,d,e,f,g]

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.036	-0.020	0.012	0.067	0.052	0.084
	(0.091)	(0.085)	(0.077)	(0.067)	(0.067)	(0.063)
Prior performance	0.151	0.161	0.159	0.138	0.172	0.163
	(0.131)	(0.129)	(0.124)	(0.114)	(0.120)	(0.117)
Total asset	0.014	0.016	0.004	-0.001	0.000	-0.001
	(0.020)	(0.021)	(0.023)	(0.020)	(0.021)	(0.020)
Current ratio	-0.011	-0.010	-0.012	-0.015	-0.013	-0.014
	(0.013)	(0.013)	(0.013)	(0.012)	(0.013)	(0.013)
Debt-to-equity ratio	-0.002	-0.002	-0.001	0.001	-0.001	0.000
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.001)
R&D expenditure	0.018**	0.018**	0.018*	0.017*	0.017*	0.017*
	(0.006)	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)
Advertising expenditure	0.019**	0.021**	0.019**	0.023**	0.020**	0.023**
	(0.006)	(0.006)	(0.007)	(0.007)	(0.007)	(0.007)
Total entropy	-0.029	-0.035	-0.039	-0.048+	-0.036	-0.041
	(0.033)	(0.030)	(0.026)	(0.024)	(0.026)	(0.025)
Product market uncertainty	0.003	0.020	0.036	0.053	0.045	0.051
	(0.134)	(0.138)	(0.126)	(0.121)	(0.124)	(0.119)
Concentration ratio (4)	0.011	-0.006	-0.004	-0.042	-0.014	-0.023
	(0.106)	(0.103)	(0.105)	(0.090)	(0.098)	(0.091)
Foreign ownership	0.032	0.024	-0.031	-0.027	-0.039	-0.038
	(0.087)	(0.087)	(0.079)	(0.069)	(0.080)	(0.071)
Family's ownership (cash flow rights)		-0.036	0.014	-0.051	-0.032	-0.054
		(0.050)	(0.075)	(0.078)	(0.093)	(0.085)
Separation between cash flow and voting rights[c]			-0.038			
			(0.035)			
Separation between cash flow and voting rights[d]				-0.007***		
				(0.002)		
Separation between cash flow and voting rights[e]					-0.061	
					(0.044)	
Separation between cash flow and voting rights[f]						-0.040**
						(0.014)
No. of observations	176	176	175	175	175	175
Number of business groups	33	33	33	33	33	33
R-squared (within)	0.112	0.114	0.119	0.139	0.125	0.134
R-squared (overall)	0.008	0.006	0.015	0.011	0.015	0.013
R-squared (between)	0.000	0.001	0.002	0.001	0.005	0.002
F statistic	5.160	5.331	4.674	18.66	5.236	10.84
corr(X,μ)	-0.863	-0.879	-0.849	-0.884	-0.870	-0.880

a. Robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. voting rights - the ultimate cash flow rights
d. voting rights / the ultimate cash flow rights
e. (voting rights - the ultimate cash flow rights)/voting rights
f. Log(voting rights / the ultimate cash flow rights+1)
g. Year dummies are included but not reported

Table B4. The fixed-effects panel estimates for restructuring towards vertically integrated business portfolio in the forward direction[a,b,c,d,e,f,g]

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.132	0.031	-0.010	0.051	-0.007	0.051
	(0.095)	(0.081)	(0.076)	(0.078)	(0.080)	(0.087)
Prior performance	0.221	0.158	0.157	0.116	0.155	0.152
	(0.246)	(0.203)	(0.209)	(0.194)	(0.204)	(0.199)
Total asset	0.013	-0.003	0.012	0.006	0.012	0.008
	(0.019)	(0.029)	(0.023)	(0.023)	(0.023)	(0.023)
Current ratio	0.003	-0.001	0.001	-0.001	0.002	0.001
	(0.022)	(0.020)	(0.021)	(0.022)	(0.022)	(0.022)
Debt-to-equity ratio	-0.002	0.000	-0.001	0.003	-0.000	0.001
	(0.003)	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)
R&D expenditure	0.032**	0.032***	0.033***	0.032**	0.033***	0.033**
	(0.010)	(0.009)	(0.009)	(0.009)	(0.009)	(0.009)
Advertising expenditure	0.024*	0.012	0.014	0.020+	0.014	0.018
	(0.011)	(0.013)	(0.011)	(0.011)	(0.012)	(0.012)
Total entropy	-0.094**	-0.059**	-0.052*	-0.053*	-0.046+	-0.045+
	(0.030)	(0.021)	(0.025)	(0.023)	(0.026)	(0.025)
Product market uncertainty	0.202+	0.095	0.075	0.100	0.078	0.091
	(0.100)	(0.092)	(0.102)	(0.097)	(0.103)	(0.098)
Concentration ratio (4)	-0.256*	-0.148	-0.140	-0.135	-0.115	-0.111
	(0.120)	(0.105)	(0.106)	(0.106)	(0.106)	(0.112)
Foreign ownership	-0.099	-0.047	0.010	-0.030	-0.014	-0.035
	(0.124)	(0.091)	(0.097)	(0.092)	(0.098)	(0.096)
Family's ownership (cash flow rights)		0.233*	0.172*	0.073	0.156+	0.096
		(0.101)	(0.070)	(0.087)	(0.084)	(0.085)
Separation between cash flow and voting rights[c]			0.029			
			(0.044)			
Separation between cash flow and voting rights[d]				-0.009**		
				(0.003)		
Separation between cash flow and voting rights[e]					-0.016	
					(0.046)	
Separation between cash flow and voting rights[f]						-0.041+
						(0.021)
No. of observations	176	176	175	175	175	175
Number of business groups	33	33	33	33	33	33
R-squared (within)	0.116	0.165	0.131	0.154	0.130	0.140
R-squared (overall)	0.0306	0.0467	0.0556	0.0625	0.0581	0.0617
R-squared (between)	0.0630	0.0833	0.128	0.111	0.134	0.127
F statistic	5.098	2.906	5.918	41.21	3.766	6.664
corr(X,μ)	-0.912	-0.908	-0.864	-0.869	-0.858	-0.865

a. Robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. voting rights - the ultimate cash flow rights
d. voting rights / the ultimate cash flow rights
e. (voting rights - the ultimate cash flow rights)/voting rights
f. Log(voting rights / the ultimate cash flow rights+1)
g. Year dummies are included but not reported

Table B5. The fixed-effects panel estimates for restructuring towards vertically integrated business portfolio (based on Fan and Lang's (2000) vertical relatedness)[a,b,c,d,e,f,g]

	(1)	(2)	(3)	(4)	(5)	(6)
Constant	-0.749+	-0.940*	-0.975*	-0.945*	-1.043**	-1.013*
	(0.413)	(0.377)	(0.385)	(0.396)	(0.369)	(0.409)
Prior performance	0.475	0.328	0.294	0.267	0.270	0.286
	(0.595)	(0.580)	(0.612)	(0.615)	(0.596)	(0.606)
Total asset	0.128	0.077	0.060	0.062	0.065	0.063
	(0.102)	(0.114)	(0.110)	(0.112)	(0.111)	(0.112)
Current ratio	-0.114	-0.127+	-0.140+	-0.138+	-0.139+	-0.138+
	(0.073)	(0.070)	(0.072)	(0.072)	(0.072)	(0.073)
Debt-to-equity ratio	-0.007	-0.002	0.000	0.002	-0.000	-0.000
	(0.012)	(0.010)	(0.008)	(0.006)	(0.008)	(0.007)
R&D expenditure	-0.049	-0.051+	-0.057+	-0.056+	-0.057+	-0.057+
	(0.029)	(0.027)	(0.029)	(0.029)	(0.029)	(0.029)
Advertising expenditure	-0.065***	-0.096***	-0.107***	-0.102***	-0.110***	-0.110***
	(0.017)	(0.025)	(0.024)	(0.026)	(0.022)	(0.024)
Total entropy	0.258+	0.330**	0.345*	0.349**	0.340*	0.352**
	(0.128)	(0.119)	(0.127)	(0.117)	(0.124)	(0.118)
Product market uncertainty	-0.229	-0.450	-0.468	-0.453	-0.483	-0.474
	(0.341)	(0.366)	(0.349)	(0.354)	(0.346)	(0.351)
Concentration ratio (4)	0.866+	1.124*	1.255*	1.268*	1.276*	1.297**
	(0.486)	(0.487)	(0.533)	(0.470)	(0.478)	(0.459)
Foreign ownership	-0.069	0.025	0.121	0.070	0.137	0.099
	(0.256)	(0.260)	(0.283)	(0.271)	(0.269)	(0.270)
Restructuring into related business portfolio	0.174*	0.218**	0.384*	0.359*	0.390*	0.385*
	(0.068)	(0.068)	(0.150)	(0.169)	(0.151)	(0.156)
Family's ownership (cash flow rights)		0.558**	0.523*	0.451	0.605*	0.547+
		(0.196)	(0.212)	(0.273)	(0.247)	(0.274)
Separation between cash flow and voting rights[c]			0.062			
			(0.185)			
Separation between cash flow and voting rights[d]				-0.006		
				(0.016)		
Separation between cash flow and voting rights[e]					0.106	
					(0.171)	
Separation between cash flow and voting rights[f]						0.017
						(0.106)
No. of observations	176	176	175	175	175	175
Number of business groups	33	33	33	33	33	33
R-squared (within)	0.268	0.312	0.325	0.325	0.326	0.324
R-squared (overall)	0.0242	0.0465	0.0519	0.0523	0.0493	0.0511
R-squared (between)	0.0468	0.105	0.122	0.119	0.118	0.124
F statistic	10.73	27.84	19.24	18.59	16.89	15.76
corr(X,μ)	-0.957	-0.949	-0.953	-0.953	-0.956	-0.955

a. Robust standard errors in parentheses
b. *** p<0.001, ** p<0.01, * p<0.05, + p<0.1
c. voting rights - the ultimate cash flow rights
d. voting rights / the ultimate cash flow rights
e. (voting rights - the ultimate cash flow rights)/voting rights
f. Log(voting rights / the ultimate cash flow rights+1)
g. Year dummies are included but not reported

GENERAL CONCLUSION

Building on agency theory, prior literature paints an overly grim picture of family business groups which are argued to provide the ideal venue for the family's self-serving behavior via the unique ownership pattern or the separation of cash flow rights from control rights. The separation is suggested to bring about a novel type of agency problem—i.e., principal-principal conflicts—by distorting the controlling shareholder's incentive structure and rendering him/her insulated from capital market discipline (Morck et al., 2005). However, this stream of literature has overlooked the possibility (1) that the separation is not a sufficient condition but merely a necessary condition for the family's self-serving behaviors and (2) that the inner-workings and developmental trajectories of family business groups bringing about the separation are not necessarily driven solely by agency motive. The implication is that research can slip by neglect of these possibilities; further investigation into alternative theoretical frameworks is soundly warranted. This thesis seeks to remedy this deficiency.

Study 1 indicates that the separation may come about as a consequence or epiphenomenon of active use of internal capital market within a business group. So conceived, the separation is not necessarily translated into the family's self-serving behaviors especially when the

family as a steward abstains from pursuing its own interests at the expense of other minority shareholders (cf. Davis et al., 1997; Wasserman, 2006).; rather, it yields various financing advantages (Masulis et al., 2011; Villalonga & Amit, 2009). Running counter to the dominant view that takes the separation as inflicting harm on firm performance, study 2 holds both theoretical and policy implications and suggests a number of future research directions as detailed above.

In the same spirit, study 2 suggests that the separation at the business group level has also little bearing on agency problem. Granted, entrenchment by the separation of ownership structure can shield the family from *capital market discipline*. Yet it cannot shield it from the *institutional pressure* from government agencies, regulatory bodies, professional groups, and mass media that are thought to set out rules and norms (DiMaggio & Powell, 1983; Scott, 2001). On the contrary, radical separation will attract a substantial amount of attention from these institutional constituencies (Dyck et al., 2008), beefing up institutional pressure with regard to corporate governance. Consequently, family business groups with the separation have to additionally contend with the institutional pressure for good corporate governance, rather than enjoying entrenchment from capital market

pressure. Simply put, a theoretical lens more relevant to the analysis of the separation at the business group level is institutional theory rather than agency theory.

Taken together, this thesis cautions against blindly using agency theory in the analysis of the unique ownership pattern or the separation of cash flow rights from control rights in the context of family business groups and calls for identifying theoretical mechanisms alternative or complementary to agency theory (Eisenhardt, 1989). In that way, research can make further progress in understanding the linkage between the unique ownership pattern and functioning, strategic choices, and outcomes of family business groups.

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국문 초록

한국의 대규모기업집단에서 소유구조가 기업의 성과와 기업집단의 구조조정에 미치는 영향

진 규 호

서울대학교 대학원

경영학과 경영학 전공

가족기업집단은 미국과 영국을 제외한 전 세계의 모든 나라에 존재하는 보편적인 조직형태로서 대개 소유권(또는 현금흐름권)과 지배권이 괴리되는 매우 독특한 소유구조를 가진다. 대리인 이론을 기반으로 하는 기존의 학설은 이와 같은 소유권과 지배권의 괴리가 사회적으로 바람직하지 않다고 주장한다. 이는 이와 같은 괴리가 주주들의 유인구조를 왜곡함으로써 기업의 성과를 낮추고 나아가 사회전체의 효익을 저해한다고 보기 때문이다. 그러나 최근 발표된 새로운 연구들은 소유권과 지배권의 괴리가 기존 학설이 주장하는 것처럼 단순히 대리인 문제를 유발하는 것이 아니라 가족기업집단의 내부기능과 전략적 선택 및 성과에 보다 광범위한 영향을 미치고 있다고 보고하고 있으며, 좀더 많은 연구의 필요성을 지적하고 있다. 이에 본 연구는 제도이론, 내부시장가설, 청지기이론 등의 상호보완적인 이론적 틀을 토대로 가족기업집단에서 발견되는 독특한 소유구조의 여러 영향을 재벌을 대상으로 분석하고자 한다.

첫번째 연구는 분석수준이 기업으로 소유권과 지배권의 괴리가 재벌에 속한 기업의 경영성과에 미치는 영향을 살펴본다. 이 연구는 대리인 이론에 기반한 기존 관점과는 다르게 내부시장가설을 이용하여 어떻게 소유권과

지배권의 괴리가 재벌기업의 경영성과 및 시장가치에 긍정적 영향을 줄 수 있는지 면밀히 검토한다. 이 연구는 2003 년부터 2010 년까지의 자료를 사용하여 소유권과 지배권의 괴리가 기업의 경영성과에 정의 영향을 주는 것을 통계적으로 확인하였으며, 또한 이 정의 관계가 재벌의 성과, 주식시장에서 애널리스트의 보고서가 발간되는 종목의 비율, R&D 투자비용, 그리고 조직잉여자원에 의하여 조절됨을 발견하였다. 이 연구는 내생성을 통제한 각 변수의 불편추정치를 얻기 위하여 패널데이터를 기반으로하여 Arellano-Bond 의 선형일반적률추정법(GMM)을 사용하였다. 이 연구는 가족기업집단에서는 소유권과 지배권의 괴리가 발생하는 이유가 기존의 관점과는 상이하다는 점에 주목하여 기업의 성과에 부정적 영향을 미치는 기존의 관점에 의문을 제기한다. 또한 이 연구는 주주 권익의 보호가 약한 나라들에서 소유권과 지배권에 대한 규제를 제정하는 정책입안자들에게 정책적 함의를 내포하고 있다.

두번째 연구는 분석수준을 기업에서 기업집단으로 올려, 이와 같이 독특한 신흥국 가족기업집단의 소유지배구조가 구조조정전략에 미치는 영향 및 메커니즘에 대하여 분석한다. 이 연구는 기업다각화연구를 기초로 관련다각화 및 수직적통합이 이루어진 사업포트폴리오가 위험을 낮춰줌을 보이고 가족의 소유권은 이와 같은 사업포트폴리오를 구축하는 방향으로 영향을 준다고 주장한다. 이는 가족이 기업집단의 주주로서 위험회피적 성향을 가지기 때문이다. 더불어, 이 연구는 신흥국에서는 제도적 압력 및 시장 압력이 기업집단 사업포트폴리오의 관련성을 높이거나 수직적통합 낮추는 방향으로 작용한다고 가정하고, 소유권과 지배권의 괴리는 가족이 이에 순응토록 한다고 주장한다. 이는 기업집단의 소유권과 지배권의 괴리는 기업지배구조 개선에 대한 제도적 압력을 발생시키는 반면, 가족은 기업집단에 대한 통제력 약화 없이 기업지배구조를 개선시키는 데 필요한 천문학적 자금을 마련할 수 없기 때문에 기업집단의 사업구조에 대한 제도적 압력에 적극적으로 순응함으로써

기업지배구조 개선에 대한 제도적 압력에 순응하지 못할 때 발생하는 징벌을 최소화하기 전략으로 생각된다. 이는 또한 Okhmatovskiy & David (2012)이 제시한 대체반응(substitution response)과 일맥상통한다고 볼 수 있다. 재벌 데이터를 사용하여 추정한 결과에 의하면, 가족의 소유권은 사업포트폴리오의 관련성과 수직적 통합을 증가시키고, 소유권과 지배권의 괴리는 사업포트폴리오의 수직적 통합을 감소시키는 것으로 나타났다.

결론적으로 이 연구는 주로 대리인 이론에 기반하고 있는 가족기업집단에 대한 이해를 증진시키는 데 그 의의가 있다고 하겠다. 무엇보다 이 연구는 내부시장가설과 제도이론을 소유구조의 분석에 도입하여 가족기업집단에서 독특하게 발견되는 소유구조가 그 기업집단의 내부기능, 전략적 선택 및 성과에 미치는 영향을 기업과 기업집단 수준에서 체계적으로 보여주고 있다.

주요어: 소유권과 지배권의 괴리, 가족기업집단, 내부자본시장, 제도적 압력

학 번: 2010-30154