Journal of Business Ethics (2018) 153:931–954
https://doi.org/10.1007/s10551-018-3916-0

ORIGINAL PAPER

Business Groups and Corporate Social Responsibility

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Received: 20 December 2016 / Accepted: 3 May 2018 / Published online: 18 May 2018

Abstract
There is a growing literature on corporate social responsibility (CSR), but few have focused on the implications of business groups for CSR. We examine the antecedents and outcomes of CSR behaviors of group firms in Korea. We find that group affiliation is associated with higher CSR overall and for its major societal and environmental components. However, the ownership disparity between cash flow and control by controlling inside shareholders is associated with lower CSR, consistent with opportunistic rent expropriation theory. We further find that CSR initiatives can impact group firms positively in the event of bad events, consistent with insurance theory. This motive for CSR as a means of enhancing reputation capital to buffer the bad events is pronounced for group firms because of group-wide dissemination of negative reputational externality.

Keywords Corporate social responsibility · Business group · Chaebol · Ownership disparity · Reputational externality · Reputation capital

Introduction

Corporate social responsibility (CSR) is inconsistent with the short-term shareholder view. Friedman (1970) argues that "the social responsibility of business is to increase its profits," implying that CSR spending is at the expense of profits and firm value. The stakeholder view, in contrast, maintains that CSR can increase firm value because of the benefits of stakeholder support for the firms (Carroll 1979, 1991, 1999; Freeman et al. 2004; Kitzmueller and Shimshack 2012). Carroll (1979), in particular, defines social responsibility with four categories: economic, legal, ethical, and discretionary responsibilities. Economic responsibility of a firm is consistent with the shareholder view and can be fulfilled without much pressure from non-investing stakeholders. For other corporate responsibilities, non-investing stakeholders are involved. After all, a firm ought to conduct its business within the confines of law and regulations and be in compliance with government requirements. Ethical responsibility is not binding, nevertheless is normative although its boundaries and actions are difficult to define precisely. Discretionary responsibility, also known as philanthropic responsibility, is driven by societal norms (Carroll 1991, 1999).[1]

Consistent with the stakeholder view, Cochran and Wood (1984) argue that CSR can generate superior access to resources, and Godfrey (2005) suggests that CSR can create goodwill, reputation capital, and legitimacy to the local community. In addition, researchers have documented various specific benefits with CSR related to favorable capital market perceptions and reduction in agency costs.[2] However,

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[1] Standard data sources on CSR such as Thompson Reuters ASSET4 classify them as society, environmental, and governance CSR in addition to economic activities. A detailed list of CSR data from Thompson Reuter ASSET4 database is in Appendix 2.

[2] Documented benefits from CSR for firms include higher analyst followings and recommendations, and forecasting accuracy (Hong and Kacperczyk 2009; Ioannou and Serafeim 2015; Dhaliwal et al. 2012); effective corporate governance and enhanced firm value (Blazovich and Smith 2011; Jo and Harjoto 2011, 2012); lower cost of equity and higher credit rating (Dhaliwal et al. 2011; El Ghoul et al. 2011; Attig et al. 2013).

it is also possible that CSR activities may decrease firm value by increasing managers' ability to opportunistically exploit corporate resources for their private gains (Pagano and Volpin 2005; Cronqvist et al. 2009; Barnea and Rubin 2010; Masulis and Reza 2015). Consistent with spending corporate resources à la Friedman (1970), CSR activities can also incur costs, including direct costs such as charitable donations or environmental protection costs, as well as indirect costs if the firm becomes less flexible and operates at lower efficiency (Claessens and Yurtoglu 2013).

Existing work on CSR is confined to independent, unaffiliated firms. However, business groups are prominent not only in emerging markets but also in developed countries such as Japan, Germany, and other European countries. A business group is a collection of 'firms which, though legally independent, are bound together by a constellation of formal and informal ties and are accustomed to taking coordinated action' (Khana and Rivkin 2001, p. 47). A group firm has a separate external governance system at the firm level (even though it is subject to group-level coordination), thus is different from a conglomerate that has only one governance system (even though they may have multiple production divisions). Khanna and Palepu (2000) argue that business groups are formed to fill the institutional voids due to inadequate local institutional infrastructure, and Campbell (2007) suggests that the extent of socially responsible behavior of firms depends partly on underlying institutions.

From the CSR perspective, group firms are different from independent firms for several reasons. First, CSR decisions may be motivated by group-wide considerations as well as firm-specific reasons. This means that a group firm may engage in CSR for group-wide reasons even when it may not be supported by stakeholder issues at the level of an individual firm. Second, the ownership disparity between cash flow and control ownership of a group firm arising from complex pyramidal or circular ownership structures (e.g., Mitton 2002; Joh 2003), along with the informational opacity it creates, increases opportunistic private consumption by controlling insiders. Third, the industrial and international diversification of group firms may act as operational hedging (Choi and Jiang 2009) and thereby lower the firm's business risk and increase firm value. Fourth, a group firm has generally greater internal capital markets and financial flexibility that could shift funds and resources across firms within the group. This financial flexibility indicates greater resource provision for sustainable long-term projects including CSR that might not be possible by unaffiliated stand-alone firms, mitigating some of the costs of CSR engagements. Finally, the effect of reputational externality can be group-wide. Especially, a possibility of a negative externality is potentially serious for a group firm as the reputation capital can be damaged across all firms in the group in the event of a bad event by one group firm (e.g., fraud, media or prosecuting investigation). In such situation, consistent CSR may buffer the reputation damage or buy goodwill. This insurance-like motive (Shiu and Yang 2017) should be most pronounced for group firms and contrasts with unaffiliated stand-alone firms where the externality only occurs across stakeholders within the firm.

The purpose of this paper is twofold. First, we purport to examine the impact of business group affiliation on CSR initiatives in Korea. Second, we investigate the outcomes of CSR by group firms focusing on the effect of ownership disparity and the possibility for negative reputational externality. Korea is ideally suited to the study of the group-CSR nexus for several reasons. First is the dominance of business groups (chaebol) in South Korean economy: the annual revenues of top 10 groups are greater than the annual Gross Domestic Product of South Korea. Second, chaebols almost perfectly depict the central conflict between the controlling shareholders and insiders and non-controlling outside shareholders, hence its implications for CSR. Third, the cash flow–control ownership disparity of chaebols presents an interesting case to examine its effect on CSR from the standpoint of stakeholder theory. While several authors (e.g., Campbell and Keys 2002; Joh 2003; Baek et al. 2004; Choi et al. 2007) have examined the effect of corporate governance on industrial firms in Korea, none has investigated the effect of chaebol firms on CSR systematically. In fact, to the best of our knowledge, our study is the first of its kind to examine the empirical association among business group (including ownership disparity), CSR, and firm value in Korea or elsewhere.

The results show that group firms engage in more CSR than stand-alone non-group firms, however, the coefficients on the ownership disparity are negative and statistically significant, indicating opportunistic rent-seeking, expropriation behaviors by controlling shareholders and insiders, and reducing resources available for CSR. At the same time, the coefficients on CSR and its sub-indices are positive in firm value regressions, and the interaction terms between business group and CSR are positive and statistically significant, consistent with stakeholder theory and resource dependence theory. In particular, there is evidence that group firms may use CSR to buffer the repercussions of bad events, consistent with insurance theory. This insurance-like motive is most pronounced for group firms because the reputational negative externality is group-wide.

The remainder of this paper proceeds as follows. The following section discusses related literature. Then the subsequent section introduces our hypothesis on the relation between business groups and CSR. Next section presents our sample and research design. Subsequent section presents our empirical results. The last section contains discussions and conclusion.

Related Literature on Business Groups

Business Group: The Korean Experience

South Korea is prominent in business group literature for several reasons. First, while much of the focus in the U.S. is on the agency conflict between management and shareholders (type I agency problem) with diffused ownership structure (Jensen and Meckling 1976), outside of Anglo-Saxon countries, the central conflict is between the controlling shareholders and insiders and non-controlling outside shareholders (type II agency conflict) with concentrated ownership (La Porta et al. 1999). Major agency conflicts originate from the divergence of interests between controlling shareholders and non-controlling outside shareholders (Claessens et al. 2000; Almeida and Wolfenzon 2006). Korean group firms typically have controlling family shareholders who exercise significant control with small cash flow ownership made possible by interlocking pyramid and circular ownership structures (Joh 2003; Baek et al. 2004). For instance, Mr. Lee, the Chairman of the Samsung Group, and his family hold a mere 1.64% of the overall group shares, yet he exerts significant control as "owner" through vast cross shareholding structure (Murillo and Sung 2013).

Second, the cash flow–control ownership disparity provides an excellent arena to examine controlling shareholders' opportunism. An increase in the wedge between the voting rights and cash flow rights means that controlling shareholders could minimize the risk of cash flow ownership while maximizing the benefits of control rights.[3] Thus, the controlling shareholders are more likely to exploit external shareholders' rights the greater the ownership disparity, similar to political rent-seeking phenomenon (Krueger 1974). The rent-seeking behavior of controlling shareholders is primarily due to their exploitation of non-controlling outside shareholders who may be less sophisticated and vulnerable in the environment of informational opacity of business groups (Park et al. 2006).

Third, chaebols are diversified widely across industry and actively involved in international operations. This could mean operational risk reduction or insurance benefits for group firms versus non-group firms. In addition, although, unlike Japanese kereitsu firms, commercial banks are prohibited from partaking in chaebol ownership in Korea, other financial firms such as securities or insurance firms are often parts of chaebol, which facilities group-wide information sharing as well as provides an access to external funds (Morck and Nakamura 2000).

After the Asian financial crisis of 1997, a series of corporate reforms was instituted along with currency reform and market liberalization (Choi and Papaioannou 2010). Yanagimachi (2014) pointed it out that the Korean corporate reforms aimed at reducing the traditional characteristics of chaebol and fostering an Anglo-American corporate governance system. Through these reforms mandated by the government, informational transparency and financial soundness of the chaebol were substantially improved.[4]

Business Group and Ownership Disparity

La Porta et al. (1999) show that, despite widely diffused ownership structure usually assumed in traditional corporate finance paradigm, the corporate ownership structure actually is fairly concentrated and largely dominated by controlling shareholders and founding families outside of a few developed economies that have strong legal shareholder protections. Campbell and Keys (2002) argue that the collapse of the internal corporate governance system in chaebol firms led to sales growth but with lower profitability, thereby aggravating the economic damage of the currency crisis. Even when there is no dispute on the beneficial effect of an improved corporate governance system on firm value or profitability, controlling shareholders and insiders are often unwilling to accept the reform because of their concerns on keeping controls, which enabled them to extract resources from non-controlling outside shareholders. Indeed, Bebchuk and Neeman (2010) present a model for describing how an interest group might seek rents by interfering with regulations concerning investor protections.

Analyzing firm-level data in Korea, Joh (2003) reports that firms with greater ownership disparity between controlling and outside minority shareholders showed lower profitability during 1993–1997, right before the Asian financial crisis. Baek et al. (2004) find that non-financial Korean firms with larger foreign ownership, better disclosure quality, less concentrated ownership of chaebol families, and weaker voting rights of controlling shareholders suffered significantly less declines in their stock returns during the Asian financial crisis.

[3] We define the cash flow–control ownership disparity as the wedge between the voting rights and cash flow rights of the controlling shareholders. The wedge indicates a deviation from the one-share-one-vote rule as identified by Gompers et al. (2010). The disparity is quite large in Korea with voting rights averaging 48.7% while cash flow rights averaging 17.9% over the period of 2004–2010 (Korea Fair Trade Commission 2010).

[4] The chaebol system is still highly susceptible to corruption scandals. For instance, Lee Jae-Yong, head of Samsung Group has been implicated in the scandal in regard to the impeachment of former President Park Keun-Hye, and is currently undergoing trial. This is an unfortunate example of unethical strategic positioning of a few business groups in Korea.

Hypotheses on Business Groups and CSR

There are three streams of research related to business group and CSR. First stream of research is from the "institutional voids" paradigm in emerging markets (see survey by Khanna and Yafeh 2007). Khanna and Palepu (2000) have coined the term "institutional voids" to help explain the market ecosystem on which firms are dependent, and that the institutions making up this market ecosystem are either absent or not well functioning in emerging economies. They argue that business groups fill in the institutional voids such that business groups perform many economic and social functions that are normally conducted by well-developed institutions in developed countries. This view of business group is conducive to CSR engagement by group firms, CSR functions being part of societal institutional infrastructure.

Drawing on resource-based view along with institutions, El Ghoul et al. (2017) posit that the value of CSR is greater in countries where an absence of market-supporting economic institutions tends to increase transaction costs and to limit access to resources. They find that CSR is more positively related to firm value in countries with weaker market institutions, providing some evidence on the channels through which CSR may reduce transaction costs. They also claim that CSR is associated with improved access to financing in countries with weaker equity and credit markets, greater investment, and lower default risk in countries with more limited business freedom, and longer trade credit period and higher future sales growth in countries with weaker legal institutions. These support the role of non-market mechanisms such as CSR through which firms can recompense for institutional voids.

Although business groups have major influences in emerging markets, no existing study focuses on the connection between business group and CSR. However, there are works on the role of internal capital markets in business groups, which becomes especially important when institutional infrastructures are weak (Chang and Hong 2000; Chang et al. 2006; Zhang et al. 2016).[5] Chang and Hong (2000) examine the economic performance of the firms associated with Korean chaebols by explicitly considering group-wide resource sharing and internal business transactions. They find that group-affiliated firms benefit from group membership through sharing intangible and financial resources with other member firms.

One of the prominent benefits of business group membership is to use internal markets (Khanna and Tice 2001). Finance research focuses on whether and how the internal capital market can supplement inefficient external markets, creating values overall (e.g., Scharfstein and Stein 2000). However, in management literature, internal capital markets are a specific example of internalization by multinational firms (Dunning 1980), which creates internal markets for production, marketing and labor globally. As applied to CSR, if a group firm increases CSR, the reputational beneficiaries of the CSR are all firms in the same group. This within-group positive externality is analogous to well-documented umbrella marketing effect (Aaker 2004; Barth et al. 1998). The benefits include an ability to attract quality workers and to motivate exiting workers, as well as a possibility of attracting future businesses. Since CSR is one of the instruments of generating these reputational benefits, which can extend to all firms in the group as opposed to a single firm, it follows that in order to capture positive reputational benefits, group firms will have greater incentives to engage in CSR than non-group firms. These support the role of non-market mechanisms such as CSR through which firms can recompense for institutional voids.

The second stream of research related to CSR and business group is resource dependence theory. CSR activities can be viewed as a means through which a firm can decrease the risks associated with resource acquisition (Haley 1991; Berman et al. 1999). If CSR activities enhance public image of a firm, then the firm's stakeholders, including shareholders, employees, customers, suppliers and the community, are likely to feel more positive toward the firm and therefore may exert additional efforts or otherwise provide more resources to the firm (Frooman 1999; Backhaus et al. 2002). In addition to helping the firm secure the acquisition of valuable resources, CSR may also help decrease the risk of losing existing resources (Godfrey 2005; Barnett and Salomon 2006). Moreover, since resources can be raised or mobilized in internal capital markets, additional resources may be generated for CSR by group firms. That is, the financial and operational flexibility enabled by resource additions of group affiliation can help the group firm in dealing with the

[5] Zhang et al. (2016) examine business groups in three countries, China, Japan, and Sweden, by providing a view as to why and how business groups solve economic problems, and how the specific national context of the group affects its performance. Their first observation is that the business groups emerged during times of institutional instability and persisted afterwards thanks to cooperative capitalism and export-oriented economy. Second, business groups have used diversification strategy to share risk at the group level and to reduce costs at the firm level. Third, business groups utilize a group planning unit to reduce problems associated with high management and coordinate costs spread out in multiple industries and in multiple locations. With respect to internal markets, there are national differences in intra-firm behaviors and in the ways in which national governments mobilize business groups to reach certain economic and social goals. They claim that the emergence and persistence of successful business groups shows that the Anglo-Saxon model of the firm may not be the only viable business model globally.

direct and indirect costs arising from the CSR engagements better than a stand-alone firm.

The third stream of research pertaining to business group is institutional theory. The general tenet of institutional theory (North 1990) is that institutions are important as factors influencing the decisions and performance outcomes of organizations including firms. This includes corporate decisions on CSR. We rely on the "institution voids" argument of Khanna and Palepu (2000), Khanna and Yafeh (2007), and others that, in emerging markets where indigenous institutional infrastructure is weak, business groups can serve a positive economic role of filling in such "voids" by creating internal markets and institutional structures within the business group.

Specifically, as we previously discussed: "One of the prominent benefits of being a business group member is to use internal markets (Khanna and Tice 2001). Finance research focuses on whether and how the internal capital market can supplement inefficient external markets, creating values overall (e.g., Scharfstein and Stein 2000). However, in management literature, internal capital markets are a specific example of *internalization* by multinational firms (Dunning 1980), which includes internal markets created for production, marketing, and labor globally." These support the role of non-market mechanisms such as business groups through which firms can compensate for institutional voids.

We then relate CSR and business groups. CSR is, indeed, more tightly linked to formal institutions of stakeholder participation or state intervention in advanced economies (Brammer et al. 2012) than in emerging markets. Specifically, we recognize that the tensions between business-driven and multi-stakeholder forms of CSR extend not only to individual firms within the group but also to other firms in the business group such that the value of CSR is potentially greater for group firms than independent stand-alone firms. Institutional theory thus provides a context of our study on business groups and their CSR engagement in emerging markets such as Korea. Beyond the present empirical work, institutional theory also is useful in providing a theoretical framework in exploring the nexus between business group and CSR in varying institutional settings including the extent of functioning financial and legal institutions. In sum, from the perspectives of institutional voids paradigm, resource-dependent view, and institutional theory, we expect the following baseline proposition regarding the CSR of business group firms.

Hypothesis 1 (H1) A firm's CSR engagement is positively associated with its business group affiliation.

We now consider the ownership characteristics of business groups. Business groups are notorious with agency costs arising from the dominance of controlling owners and insiders, which is exacerbated by the disparity between cash flow ownership and control ownership. Agency costs range from perks to tunneling (Siegal and Choudhury 2012). Complex and opaque group structure is destined to create group-specific agency problems. Group chairperson or "owner" may have significant control ego, projecting personal preferences on the group. Even if the group-controlling owner always acts for the good of business group, it is unlikely that such group-wide objective is completely aligned with those of non-controlling outside shareholders of each member firm. In firms with a large ownership disparity, the divergences in the interests of controlling inside shareholders and of outside minority shareholders can be severe. In this case, it is likely that controlling shareholders and insiders maximize their own private interests by expropriating rents from non-controlling outside shareholders (Shleifer and Vishny 1997; La Porta et al. 1999, 2002; Almeida and Wolfenzon 2006). Also, controlling shareholders or insiders may transfer funds from one group firm to another to maximize their own personal wealth (tunneling) at the expense of outside shareholders (Claessens et al. 2002).

In Korea, the degree of ownership disparity is particularly large due to cross-holdings and interlocking of shares among affiliated firms. As a result, controlling shareholders exercise significant controls with only small cash ownerships. Thus, the ownership disparity is a good instrument measuring the degree of opportunism by controlling shareholders and insiders. The disparity implies that the controlling shareholders can maximize the benefit of control ownership while minimizing the risk of cash flow ownership. Nenova (2003) suggests that Korean firms show one of the highest private control benefits enjoyed by controlling shareholders globally.

With respect to CSR, the same can apply. For instance, controlling shareholders or insiders of chaebol firms may exercise excess voting rights to transfer resources in long-term-oriented CSR activities to short-term projects or to projects in their own private interests - CSR may not promote short-term profitability or interests of controlling shareholders. Also anecdotal evidence shows that non-controlling shareholders of chaebol firms generally may not be sophisticated and may not have good access to corporate information (Park et al. 2006). This indicates a negative association between the ownership disparity and CSR of a group firm. In Appendix 1, we modify a theoretical model of Johnson et al. (2000) for CSR and show that the ownership disparity is negatively associated with the CSR of group firms.

Hypothesis 2 (H2) The ownership disparity is negatively associated with a group firm's CSR engagement.

It is common knowledge that reputation may have significant effect on firm valuation (to wit, consider BP oil spill

in the Gulf Coast). In fact, it is arguable that firm managers often disclose bad news than good news because the disclosure of bad news may reduce legal costs (Skinner 1994; Cao and Narayanamoorthy 2011). Skinner (1994) also argues that firms may incur reputational costs if they fail to disclose bad news in a timely manner. Patten (2002) and Clarkson et al. (2008) similarly maintain that poorly performing firms are looking to explain or contextualize their poor performance by disclosing more corporate information to restore the image of the firm.

While these studies contribute to our understanding of the relation between bad news and firm reputation, there is little empirical work regarding whether media coverage about unfortunate corporate incidence decreases or increases business group's CSR engagements, and what their impact is on firm value. The most one can construe from the CSR disclosure literature is conjecture that full and fast disclosure of bad corporate events is helpful in restoring corporate reputation. Interestingly, however, Shiu and Yang (2017) suggest that in the face of negative events, consistent long-term engagement in CSR can provide insurance-like benefits to market valuation of firms.

Applied to business groups, it is plausible that a group firm would also have an insurance-like motive as it relates to CSR in bad times, and more so for group firms than non-group firms. Reputation – good or bad – would spill over to other firms in the same group. In their desire to maintain group reputation, group firms may engage in CSR more during the time of negative occurrences to compensate for negative externality for the entire group. Thus, CSR engagement can provide insurance-like benefits in the face of negative events and thus decrease operational risks (Godfrey 2005, 2009). The basic idea is that the desire to maintain reputation is endemic to group firms because a bad reputational shock at one group firm may spill over to other firms in the group – no such externality exists for unaffiliated independent firms. This is one of the genetic differences between group versus non-group firm behaviors as it relates to CSR. We hypothesize:

Hypothesis 3 (H3) A business group firm's CSR engagement during or after bad news event is positively associated with firm value conditional on the effect of bad event.

Data and Research Design

We use two primary databases: (a) *Thomson Reuters ASSET4 database(ASSET4)*, which reports CSR performance at the firm level, and (b) *Worldscope*, which provides information related to financial statements. However, because of the limited coverage of non-chaebol firms in ASSET4, we collected additional data for non-chaebol firms to combine with chaebol firms. For this purpose, we used *Data Analysis, Retrieval and Transfer System (DART)* database from the Korea Financial Supervisory Service (KFSS). We merged these data with those of ASSET4 for both chaebol and non-chaebol firms. In addition, we collected group ranking and group-level diversification data of chaebol firms using *Online Provision of Enterprises Information (OPNI)* database from the Korea Fair Trade Commission (KFTC) to combine with those from *ASSET4*. The group OPNI dataset further provides group affiliation, group ranking, number of firms in the group, types of controlling group owners, industry information of firms in the group, and other variables necessary to compute group firms' ownership disparity, which were checked against or added to the other merged database. Furthermore, although financial variables are available from *Worldscope* database, we also checked their consistency and expanded the sample size using the DART database. Exports to total asset ratios for all firms were collected from *Compustat Global*.

The ownership disparity is the difference between control rights and cash flow rights, where:

Cash flow rights = (controlling shareholder's direct share ownership + controlling shareholder's family ownership)/(Number of common stocks − Treasury stock);

Control rights = (controlling shareholder's direct share ownership + controlling shareholder's family ownership + affiliates' direct share ownership + directors' share ownership + not-for-profit organizations' share ownership)/(number of common stocks − Treasury stock).

The unbalanced panel data used in our paper comprise 549 firm-year observations for the period from 2002 to 2015. Of these, 403 observations or 73.4% of the sample, pertain to business groups, with the remaining 146 observations, or 26.6% of the sample being non-business group observations. Although our sample size is relatively small, the importance of chaebols in South Korea's economy has grown rapidly after the global financial crisis. Indeed, sales revenue generated by the top five chaebols was equivalent to 58% of the South Korea's gross domestic product (GDP) in 2015 (Chiang 2016).

The CSR Index

Theoretically, we are interested in what firms do in the interest of stakeholders other than shareholders in this paper. Broadly speaking, the stakeholders include employees, customers, suppliers, creditors, and the community as well as shareholders and management. ASSET4 collects detailed database on ratings on firm's activities in environmental, social, and corporate governance areas. Social CSR addresses issues concerning employees, customer, and local community. Environmental CSR includes issues related to interests of global or local community concerns. Governance

CSR is related to shareholders, creditors, and management. In our paper, we focus on social and environmental CSR as we are interested in corporate activities for stakeholders other than shareholders and management. We think the CSR composite index computed from the Thomson Reuters ASSET4 database connects with what we want to examine for the relationship between CSR and business group affiliation in Korea reasonably well.

The CSR index is a measure of CSR performance at the firm level. ASSET4 strictly uses publicly available information such as sustainability reports, company websites, annual reports, proxy filings, and NGO as well as news of all major providers (Thomson Reuter's data collection and rating methodology, 2012). According to McWilliams and Siegel (2001), ASSET4 provides the world's largest auditable, comparable and systematic database of CSR information at the firm level.

In the ASSET4 database, the CSR index is the equally weighted composite index of three components—society, and environmental, and corporate governance performances.[6] As is customary in CSR research, we focus on social and environmental components with the overall CSR index computed as the equally weighted average of these two sub-indices (Chatterji et al. 2016; Cheng et al. 2014; Ioannou and Serafeim 2012, 2015; Luo et al. 2015; Semenova and Hassel 2015). As a subset of CSR index, the society performance (CSR_S) is comprised of seven categories: employment quality; health and safety; training and development; diversity; human rights; corporate community involvement; and product responsibility. The environmental performance (CSR_E) is composed of three categories: resource reduction; emission reduction; and product innovation. The corporate governance performance is comprised of five categories: board structure; compensation policy; board functions; shareholders rights; and vision and strategy. Appendix 2 provides detailed information on the overall CSR index, as well as its three sub-indices, The CSR index is z-scored and normalized to position the score between 0 and 1.[7]

Empirical Model

We use two models to estimate CSR activities. The first model is our basic model estimating CSR as a function of business group dummy or the ownership disparity and controls. Controls include firm size, firm age, debt ratio, current ratio, R&D intensity, corporate governance index, and export to total assets ratios.

Due to high correlation between our CSR scores and ASSET4 governance index (correlation coefficient is 0.96), we control corporate governance based on the Korean Corporate Governance Institute (KCGI) index provided by Korean Corporate Governance service. As Korean corporate governance data became available since 2003, we use the 2002–2015 period to control for governance quality assuming that 2002 governance score is the same with 2003 governance. The KCGI index uses 86 independent items, such as the proportion of independent board members, the composition of board committees (compensation, nomination, and audit), investor protections, and so forth. We use the average KCGI index, which is the aggregate governance scores divided by 86, in all tables. We also use the "export to total assets" ratios to control for a firm's international operations in all tables.

The second model additionally includes interaction terms, CSR × business group and CSR × ownership disparity. As the dependent variable, we use the society performance (CSR_S) and environmental performance (CSR_E) in addition to the overall CSR index. However, as is customary in existing work, the overall CSR index is computed as the weighted average of two sub-indices, the society and environmental CSR, excluding the corporate governance index. In the firm value equation, we use Tobin's Q as the dependent variable, which is the sum of the market value of common stock plus the book values of preferred stock and total debts, divided by the book value of total assets.

In our main empirical work, the business group is defined as the 30 largest business groups in total assets in South Korea following previous studies (Baek et al. 2004; Almeida et al. 2011). The Korean Fair Trade Commission (KFTC) designated the list of top 30 groups since 1987 and continued to 2002. After 2002, the KFTC has published information for additional groups beyond top 30. The usage of top 30 groups, however, is still most common in chaebol research. As an alternative definition, we also use top 10 as well as top 4 business groups. Group data were collected from *Online Provision of Enterprise Information System* (*OPNI*) service of the KFTC.

As a measure of group-wide negative reputational externality, group-level negative news was hand-collected from *Maeil Kyungjae* newspaper, which is the most popular daily economic newspaper in Korea. To search for news, we used the following keywords: "chaebol chairman," "chaebol family" or "chaebol owner" along with "legal," "accusation," "accused," "fraud," "lawsuit," "embezzlement," "tax evasion," "theft," "assault," and "bribery." Most of these events are related to accusations, prosecutions or court sentences

[6] A detailed description of the CSR index is available at http://extranet.datastream.com/data/ASSET4%20ESG/documents/Thomson_Reuters_DS_ASSET4_ESG_Content_Fact_Sheet.pdf.

[7] The *Z*-Score (or standard score) is a relative measure which compares one company with the benchmark of ASSET4 company universe. The score indicates the relative CSR value in units of standard deviation of that value from the mean of all companies. (Thomson Reuter's data collection and rating methodology, 2012, available at: http://extranet.datastream.com/logon.aspx).

Table 1 Top 30 business groups (Chaebol) of Korea and their structure

Rank	Group name	Ownership type	No. of industries	No. of firms
1	Samsung	Family	29	67
2	Hyundai Motors	Family	24	51
3	SK	Family	29	82
4	LG	Family	27	63
5	Lotte	Family	25	80
6	POSCO	Government	20	51
7	GS	Family	30	79
8	Hyundai Heavy Industry	Family	16	27
9	Hanjin	Family	13	46
10	Hanhwa	Family	25	52
11	KT	Diversified	17	50
12	Doosan	Family	11	22
13	SSG	Family	9	29
14	CJ	Family	19	65
15	LS	Family	25	48
16	Daewoo Shipbuilding	Financial institution	10	18
17	Kumho Asiana	Family	17	26
18	Daerim	Family	11	24
19	Booyoung	Family	8	15
20	Dongbu	Family	23	53
21	Hyundai	Family	12	20
22	Hyundai Dept. Store	Family	13	32
23	OCI	Family	10	26
24	Hyosung	Family	21	45
25	Daewoo E&C	Financial institution	9	13
26	S-Oil	Foreign investor	1	2
27	Youngpoong	Family	13	22
28	KCC	Family	6	9
29	Mirae Assets	Family	9	31
30	Dongkuk Steel	Family	7	14

This table contains the rank of top 30 business groups in asset size, ownership type, the number of industries in which group firms engage, and the number of affiliated firms as of 2015. The rank of each group changed over the years. Ownership type is based on the identity of the largest controlling shareholders. KT Group was government-owned but was privatized in May 2002 although the National Pension Services, a passive government investment agency, retained 10.5% ownership

against the group's controlling family members with respect to criminal misbehaviors and violations including embezzlement, tax evasion, theft, assault, or bribery.

Following Jo and Harjoto (2011, 2012), we include the following variables as controls: firm size measured by the logarithm of the firm's total assets; firm age as the logarithm of number of years since the firm's founding; debt ratio as the ratio of total debts to total assets: current ratio which is the ratio of current assets to current liabilities. We also include R&D Intensity, which is the research and development expenditures divided by total sales; as well as industry and year fixed effects and constant as control variables with the robust standard errors used by White (1980). Appendix 3 provides definitions of the variables used in empirical work.

Table 1 contains ranks (in terms of market capitalization) of top 30 business groups, their ownership type, the number of industries they engage in, and the number of affiliated firms as of 2015. Out of the 30 chaebols, 25 are family firm groups; top five chaebols are Samsung, Hyundai Motors, SK, LG, and Lotte, and are all family-controlled.

Table 2 Difference tests

	Group firms (1)				Non-group firms (2)				Difference (1)–(2)	
	N	Mean	SD	Median	*N*	Mean	SD	Median	Mean	Median
CSR	403	0.682	0.296	0.835	146	0.485	0.334	0.343	0.197***	0.492***
CSR_S (social)	403	0.646	0.323	0.819	146	0.459	0.364	0.274	0.186***	0.545***
CSR_E (environmental)	403	0.718	0.293	0.883	146	0.510	0.322	0.430	0.208***	0.453***
Disparity	389	0.286	0.149	0.306	73	0.171	0.123	0.169	0.114***	0.137***
Negative news	403	0.370	0.483	0.000	146	0.034	0.182	0.000	0.335***	0.000***
Tobin's *Q*	345	1.150	0.674	0.992	112	2.115	1.742	1.602	− 0.965***	− 0.610***
Firm size	403	16.515	1.086	16.380	146	15.003	1.036	15.179	1.512***	1.201***
Firm age	403	2.724	0.723	2.996	146	2.503	0.764	2.565	0.221***	0.431***
Debt ratio	403	0.305	0.157	0.295	146	0.227	0.186	0.210	0.078***	0.085***
R&D intensity	403	0.010	0.017	0.003	146	0.024	0.039	0.007	− 0.014***	− 0.004*
Current ratio	403	0.958	0.452	0.872	146	0.666	0.372	0.617	0.252***	0.256***
Governance index	403	1.660	0.399	1.639	146	1.585	0.368	1.639	0.075**	0.000***
Export to total assets	403	0.077	0.203	0.000	146	0.046	0.151	0.000	0.030	0.000

This table reports the summary statistics for group firms, non-group firms in South Korea from 2002 to 2015. The total number of firm-year observations is 550. We also report the differences in mean and median for each variable. See Appendix 3 for variable definitions

*, **, and *** denote two-tail significance at 10, 5, and 1%, respectively

Empirical Results

Descriptive Statistics and Bivariate Correlation

In Table 2, we present the univariate analysis of the mean and median of firm-specific variables for group firms and non-group firms in Korea for the period from 2002 to 2015. All firms are listed in the Korea Stock Exchange (KSE) and the total number of firm-year observations is 549. We note that the CSR index as well as CSR_S (society) index, and CSR_E (environmental) indices, respectively, are different between group firms and non-group firms are statistically different at 1% significance level. For both mean and median, group firms are engaged in more CSR than non-group firms. In general, group firms have higher ownership disparity and better governance index than non-group firms. Group firms are also larger, older, more leveraged, but have higher liquidity and engage in somewhat less R&D relative to size. It is interesting that Tobin's *Q*, which is a measure of firm value per asset, is lower for group versus non-group firms on the mean *t* test, as well as on the Wilcoxon's median rank sum test.

Table 3 presents the Spearman correlation matrix for the same set of variables. The table shows that the CSR index has a correlation of 0.27 with the top 30 business group dummy, and 0.26 with top 10 groups, both statistically significant. In terms of the CSR sub-indices, the business group dummy has higher correlation with the environmental CSR than the society CSR (0.29 with the environmental vs. 0.24 for the society CSR for top 30 business groups). However, these results from univariate or correlation analysis are informative but preliminary. We must wait for a multivariate analysis in the next section.

Baseline Multivariate CSR Regression Results

To gain insight into the relationship between CSR and business group in a multivariate context, we estimate CSR as a function of business group affiliation (top 30, top 10 or top 4), the ownership disparity, and firm-specific controls (firm size, firm age, debt ratio, current ratio, R&D intensity, governance index, and export to total assets) plus year and industry fixed effects and constant, in Table 4. Estimations are done for the composite CSR index based on both full sample and group sample (Panel A) and for its sub-indices, society and environmental CSR based on full sample (Panels B and C).

A remarkable finding from Table 4 is that the coefficients of the group dummy (top 30 unless otherwise noted) are all positive and statistically significant at 1% level, and this is true in all three panels, for the composite CSR index (panel A) and for society and environmental CSR sub-indices (panel B and C, respectively). For top 10 and top 4 group dummies, all coefficients are also positive and significant at 1%. These results support our baseline hypothesis, H1.

Given the connection between business groups and ownership disparity, as shown in our theoretical model in Appendix 1 as well as in our discussion above in hypothesis formulation, we are interested in the effect of ownership disparity on CSR. We find that the coefficients of the ownership disparity are negative and statistically significant at 1% in models (4)–(6) for group sample and across all three panels

Table 3 Bivariate correlation matrix

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	CSR	1.00														
2	CSR_S (social)	**0.97**	1.00													
3	CSR_E (environmental)	**0.96**	**0.87**	1.00												
4	Group	**0.27**	**0.24**	**0.29**	1.00											
5	Group (top 10)	**0.26**	**0.24**	**0.26**	**0.62**	1.00										
6	Disparity	**−0.17**	**−0.15**	**−0.18**	**0.27**	**0.21**	1.00									
7	Negative news	0.07	0.06	0.07	**0.33**	**0.39**	**0.27**	1.00								
8	Tobin's *Q*	− 0.09	− 0.05	**−0.13**	**−0.37**	**−0.16**	0.09	− 0.09	1.00							
9	Firm size	**0.44**	**0.39**	**0.46**	**0.53**	**0.42**	**−0.15**	**0.14**	**−0.46**	1.00						
10	Firm age	**0.11**	0.06	**0.16**	**0.13**	**0.09**	**−0.28**	0.05	**−0.20**	**0.30**	**1.00**					
11	Debt ratio	0.02	0.00	0.05	**0.21**	**−0.17**	0.03	**−0.09**	**−0.33**	**0.18**	− 0.08	1.00				
12	R&D intensity	− 0.06	− 0.05	− 0.06	**−0.23**	− 0.07	0.04	− 0.01	**0.10**	**−0.19**	− 0.02	**−0.19**	1.00			
13	Current ratio	− 0.05	− 0.04	− 0.05	**0.29**	− 0.07	0.05	0.07	**−0.24**	**0.14**	− 0.01	**0.52**	**−0.20**	1.00		
14	Governance index	**0.17**	**0.16**	**0.16**	**0.09**	0.06	− 0.05	**0.10**	− 0.06	**0.16**	**−0.09**	− 0.02	0.03	**−0.11**	1.00	
15	Export to total assets	0.05	0.02	**0.09**	0.07	**0.10**	0.05	0.06	− 0.04	**0.12**	0.04	− 0.05	0.01	− 0.01	0.06	1.00

The table presents the Spearman correlation of all the variables. See Appendix 3 for variable definitions. Bold color indicates that the correlation is significant, at least, at the 5% level

Table 4 Impact of business group affiliation on CSR

	Full sample			Group sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Impact of business group affiliation on overall CSR index						
Group	0.087***					
	(0.033)					
Group (top 10)		0.106***			0.115***	
		(0.028)			(0.033)	
Group (top 4)			0.116***			0.131***
			(0.027)			(0.030)
Disparity				−0.393***	−0.430***	−0.427***
				(0.092)	(0.092)	(0.092)
Firm size	0.123***	0.119***	0.125***	0.117***	0.112***	0.119***
	(0.011)	(0.011)	(0.010)	(0.013)	(0.013)	(0.013)
Firm age	−0.010	−0.003	−0.001	−0.063***	−0.056***	−0.053**
	(0.018)	(0.018)	(0.018)	(0.021)	(0.021)	(0.022)
Debt ratio	0.061	0.143*	0.171**	0.333***	0.482***	0.515***
	(0.083)	(0.087)	(0.086)	(0.086)	(0.097)	(0.095)
R&D intensity	−0.547	−0.585	−0.656	4.754***	4.558***	4.251***
	(0.520)	(0.503)	(0.499)	(0.815)	(0.808)	(0.802)
Current ratio	−0.024	−0.011	−0.029	−0.028	−0.007	−0.027
	(0.027)	(0.026)	(0.028)	(0.027)	(0.027)	(0.029)
Governance index	0.173***	0.190***	0.204***	0.026	0.047	0.066
	(0.040)	(0.038)	(0.039)	(0.049)	(0.048)	(0.047)
Export to total assets	0.019	0.029	0.019	0.021	0.043	0.024
	(0.061)	(0.062)	(0.061)	(0.070)	(0.072)	(0.070)
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	−1.616***	−1.625***	−1.728***	−0.889***	−1.010***	−1.180***
	(0.160)	(0.153)	(0.142)	(0.238)	(0.231)	(0.240)
N	549	549	549	389	389	389
Adj *R*-squared	0.377	0.388	0.391	0.447	0.467	0.475
Panel B: Impact of business group affiliation on Society CSR (CSR_S)						
Group	0.083**					
	(0.036)					
Group (top 10)		0.124***			0.151***	
		(0.030)			(0.037)	
Group (top 4)			0.137***			0.176***
			(0.029)			(0.034)
Disparity				−0.333***	−0.382***	−0.379***
				(0.105)	(0.103)	(0.102)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	−1.631***	−1.600***	−1.718***	−1.324***	−1.255***	−1.487***
	(0.182)	(0.172)	(0.161)	(0.253)	(0.254)	(0.263)
N	549	549	549	389	389	389
Adj *R*-squared	0.328	0.344	0.348	0.395	0.424	0.439
Panel C: Impact of business group affiliation on Environmental CSR (CSR_E)						
Group	0.092***					
	(0.033)					
Group (top 10)		0.089***			0.078**	
		(0.028)			(0.030)	
Group (top 4)			0.095***			0.086***
			(0.027)			(0.030)
Disparity				−0.452***	−0.477***	−0.474***
				(0.090)	(0.090)	(0.091)

Table 4 (continued)

	Full sample			Group sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	−1.601*** (0.151)	−1.650*** (0.146)	−1.738*** (0.135)	−0.682*** (0.231)	−0.765*** (0.228)	−0.873*** (0.236)
N	549	549	549	389	389	389
Adj *R*-squared	0.406	0.410	0.411	0.467	0.476	0.479

This table presents panel regression results of CSR indices on business group affiliation. The dependent variable in Panel A, Panel B and Panel C is CSR index, CSR_S and CSR_E, respectively, using the full sample for the column (1)–(3) and using business group subsample for the column (4)–(6). All regressions include all control variables and year and industry fixed effects. The sample period is from 2002 to 2015. Robust standard errors are shown in parenthesis

*, **, and *** imply two-tail significance at 10, 5, and 1%, respectively

for the overall CSR as well as for two CSR sub-indices, supporting H2. These results suggest a notion that the ownership disparity *ceteris paribus* is conducive to a decrease in CSR due to the diversion of corporate resources arising from opportunistic rent-seeking expropriation of controlling insiders in an environment of informational opacity.

Regarding the effects of controls, we find that firm size has a positive and significant effect on CSR in panel A, i.e., larger firms tend to do more CSR because they have more resources. Higher debt ratios are also associated with higher CSR. Interestingly, better corporate governance is associated with higher CSR, but this is statistically significant in full sample but not in group firm sample (implications being that some of the CSR funds are siphoned off by opportunistic private consumption by controlling insiders). However, R&D intensity is associated with more CSR only in group firm sample.

Table 5 presents the results of the basic model for two CSR components (society and environmental) and for two definitions of business groups (top 30 and top 10). Panel A and B examine the effect on CSR_S (society) for top 30 and top 10 group firms, respectively. In Panel A, we see that the coefficients of group dummy (top 30) are positive on all seven society CSR categories, but statistically significant for four categories (employment, human right, community, and product responsibility) and insignificant in three (safety, training, and diversity). In Panel B for top 10 groups, the coefficients of group affiliation are positive and statistically significant at least at 5% on all seven categories of society CSR. Environmental CSR are presented in panels C for top 30 groups and in panel D for top 10 groups. The coefficients of group affiliation now are positive and significant on all three dimensions of environmental CSR: remission reduction, resource reduction, and product innovation. These results show that society CSR are more pronounced among top 10 chaebol firms, compared to lower ranked group firms, while there is no distinction for environmental CSR between top 10 versus top 30 group firms.

We also employ firm random-effect specifications to examine both within-firm and across-firm variations in the panel dataset. The fundamental difference between fixed and random effect is one of inference. While a fixed-effect analysis can only support inference about a given set of variables in the equation, a random effects model uses all the data available, and is appropriate if the omitted variables are uncorrelated with the explanatory variables that are in the model. It will produce unbiased estimates of the coefficients, and produce the smallest standard error (Wooldridge 2002).[8] Table 6 suggests that the coefficients on Group, Group (top 10), and Group (top 4) are all positive and significant in CSR regressions for full sample, and the coefficients on Disparity in group sample are significant and negative in all models. Thus, the random-effect specification results are consistent with our previous baseline results.

Regression Results of Firm Value

In Table 7, we examine the effects of CSR on firm value measured by Tobin's *Q*. In model (1), it is interesting that the interaction term of Group × CSR has a positive and significant effect on firm value. Even though the effect of the group itself becomes negative, it is noteworthy that the combined own and interaction effect of group affiliation is economically insignificant on Tobin's *Q*. In Model (2), we examine the impact of ownership disparity, which is negative and significant on Tobin's *Q*, consistent with opportunistic

[8] Random-effect specification can also allow more degrees of freedom than fixed-effect model, because rather than estimating an intercept for every cross-sectional unit, we can estimate the parameters that describe the distribution of the intercepts, and can estimate coefficients for explanatory variables that are invariant over time.

Table 5 Impact of business group affiliation on CSR components

	Dependent variable: CSR_S (society) index							
	Employment	Safety	Training	Diversity	Human right	Community		Product responsibility
Panel A: Impact of business group affiliation on sub-categories of CSR_S (society) index								
Group	0.130***	0.032	0.033	0.055	0.062**	0.077**		0.076**
	(0.038)	(0.034)	(0.034)	(0.035)	(0.028)	(0.034)		(0.032)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes		Yes
Constant	− 1.367***	− 1.306***	− 1.753***	− 1.654***	− 1.158***	− 1.082***		0.163
	(0.195)	(0.185)	(0.161)	(0.177)	(0.162)	(0.177)		(0.189)
N	543	543	543	543	543	543		543
Adj *R*-squared	0.301	0.303	0.391	0.320	0.264	0.258		0.187
Panel B: Impact of Top 10 business group affiliation on sub-categories of CSR_S (society) index								
Group (top 10)	0.109***	0.072**	0.100***	0.092***		0.141***	0.100***	0.067**
	(0.030)	(0.028)	(0.028)	(0.030)		(0.024)	(0.028)	(0.027)
Control variables	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes		Yes	Yes	Yes
Constant	− 1.465***	− 1.254***	− 1.652***	− 1.618***		− 1.053***	− 1.077***	0.112
	(0.182)	(0.178)	(0.158)	(0.170)		(0.150)	(0.164)	(0.175)
N	543	543	543	543		543	543	543
Adj *R*-squared	0.301	0.311	0.406	0.329		0.305	0.270	0.188

	Dependent variable: CSR_E (environment) index		
	Emission reduction	Resource reduction	Product innovation
Panel C: Impact of business group affiliation on sub-categories of CSR_E (environment) index			
Group	0.081**	0.065*	0.082***
	(0.035)	(0.034)	(0.030)
Control variables	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Constant	− 1.725***	− 1.658***	− 1.180***
	(0.156)	(0.165)	(0.138)
N	543	543	543
Adj *R*-squared	0.379	0.362	0.465
Panel D: Impact of Top 10 business group affiliation on sub-categories of CSR_E (environment) index			
Group (top 10)	0.067**	0.102***	0.080***
	(0.028)	(0.029)	(0.023)
Control variables	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
Year FE	Yes	Yes	Yes
Constant	− 1.788***	− 1.626***	− 1.223***
	(0.152)	(0.155)	(0.134)
N	543	543	543
Adj *R*-squared	0.379	0.376	0.468

This table presents panel regression results of CSR indices on business group affiliation. The dependent variables of Panel A and B are employment, safety, training, diversity, human right, community, and product responsibility. The dependent variables of Panel C and D are emission reduction, resource reduction, and product innovation. Group variable is equal to 1 when the firm is affiliated to one of 30 largest business groups in South Korea. All regressions include all control variables and year and industry fixed effects. The sample period is from 2002 to 2015. Robust standard errors are shown in parenthesis. See Appendix 3 for variable definitions

*, **, and *** imply two-tail significance at 10, 5, and 1%, respectively

Table 6 Impact of business group affiliation on overall CSR: random-effect specifications

	Full sample			Group sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Group	0.151*** (0.058)					
Group (top 10)		0.130** (0.052)			0.052 (0.059)	
Group (top 4)			0.096* (0.054)			0.054 (0.054)
Disparity				−0.247** (0.100)	−0.258** (0.100)	−0.265*** (0.100)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	−0.129 (0.283)	−0.177 (0.281)	−0.237 (0.281)	−0.058 (0.365)	−0.158 (0.369)	−0.243 (0.369)
N	549	549	549	389	389	389
Within *R*-squared	0.183	0.181	0.179	0.193	0.190	0.185
Between *R*-squared	0.271	0.274	0.263	0.461	0.479	0.500
Overall *R*-squared	0.250	0.262	0.247	0.390	0.409	0.419

This table presents panel regression results of CSR indices on business group affiliation with random-effect specification. The dependent variable is CSR index, using the full sample for the column (1)–(3) and using business group subsample for the column (4)–(6). All regressions include all control variables and year and industry fixed effects. The sample period is from 2002 to 2015. Robust standard errors are shown in parenthesis

*, **, and *** imply two-tail significance at 10, 5, and 1%, respectively

Table 7 Impact of business group firms' CSR on Tobin's (1958) *Q*

	(1)	(2)	(3)	(4)	(5)
Group	−0.579*** (0.128)		−0.252** (0.113)	−0.246** (0.113)	−0.256** (0.113)
Group × CSR	0.556*** (0.141)				
Disparity		−1.348*** (0.261)			
Disparity × CSR		1.884*** (0.413)			
CSR			0.469*** (0.157)		
CSR_S (social)				0.371** (0.148)	
CSR_E (environmental)					0.505*** (0.150)
Control variables	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes
Constant	9.680*** (0.941)	7.657*** (0.782)	9.517*** (0.886)	9.359*** (0.868)	9.565*** (0.896)
N	457	405	457	457	457
Adj *R*-squared	0.497	0.411	0.497	0.495	0.498

This table presents panel regression results of performance on business group affiliation and CSR indices. The dependent variable is Tobin's *Q*. Group variable is 1 when the firm is affiliated to one of 30 largest business groups in South Korea. All regressions include all control variables and year and industry fixed effects. The sample period is from 2002 to 2015. Robust standard errors are shown in parenthesis. See Appendix 3 for variable definitions

*, **, and *** imply two-tail significance at 10, 5, and 1%, respectively

rent-seeking expropriation by controlling insiders as well as the prediction made by modified Johnson et al.'s (2000) model in Appendix 4, but since the disparity × CSR interaction is positive, the combined own and interaction effect of disparity is net positive. However, the coefficients on both interactions of Group × CSR and Ownership Disparity × CSR are positive, suggesting the possibility that even when business group structure itself does not add firm value, it does so if a group firm engages in CSR.

In models (3)–(5), we examine the impact of two sub-indices, CSR_S, and CSR_E, on firm value. The result in model (3) suggests that CSR engagement overall is positively associated with Tobin's (1958) *Q*. The same results are obtained for two specific society and environment CSR sub-indices in (4) and (5). The latter results are consistent with those reported in previous studies (Edmans 2011; Jo and Harjoto 2011, 2012; Deng et al. 2013; Servaes and Tamayo 2013; Flammer 2015; Ferrell et al. 2016; Liang and Renneboog 2017). However, new result is obtained that concerns the effect of group affiliation: Although business group affiliation *per se* may not create value, it can still enhance firm value if group firms practice CSR consistently.

To mitigate the endogeneity concern, we now consider the possibility that CSR engagement being impacted by an exogenous event. This is also to examine the insurance motive of CSR in the event of a bad event (Shiu and Yang 2017) for group firms. To this end, we searched for group-wide negative events in *MaeKyung Economic Daily*. Appendix 4 lists group-level negative news events during our sample period. Our unreported univariate test indicates that there is a significant difference between the mean value of CSR before the negative effect (at year t-1), and after the event (at year t + 1). Thus we performed the quasi differences-in-differences test for changes in CSR after a negative group-specific event, similar to Bertrand and Mullainathan (2003), in Table 8.

The results in Table 8 show that CSR initiatives by group firms have increased after negative events. Although the coefficient is only significant at the 10% level, this evidence is consistent with a notion that a group firm, in its desire to uphold group reputation in the face of bad group-specific news, is likely to increase its CSR activities to compensate for a negative externality. This externality is unique to group firms. That is, unlike an independent stand-alone firm, when a group firm has a bad event, its negative reputational outcome may extend to all firms in the group. In Tobin's *Q* regression, we find confirming evidence that although a negative event initially dampens Tobin's *Q*, its interactive term with CSR is positive and significant at the 5% significance level. Economically, the positive effect of the interaction term is more than sufficient to offset the effect of negative news of its own. This is remarkable because it indicates a possibility that group firms may engage in CSR as a means of restoring the reputational damage of a negative event. In *ex ante* terms, this is in effect an insurance motive of CSR (Shiu and Yang 2017), but we show that this effect is greater for group firms than unaffiliated stand-alone firms because of an externality within the group. This confirms our hypothesis 3.

Table 8 Impact of group-level negative news on CSR and Tobin's *Q*

	CSR	Tobin's *Q*
After negative news	0.044* (0.023)	−0.290** (0.127)
After negative news × CSR		0.467** (0.182)
Control variables	Yes	Yes
Industry FE	Yes	Yes
Year FE	Yes	Yes
Constant	−1.732*** (0.146)	9.821*** (0.934)
N	549	457
Adj *R*-squared	0.372	0.487

This table presents panel regression results of CSR and Tobin's *Q* on group-level negative externality. We take negative news dummy of 1 if group owners or group as a whole face legal accusation or scandal among controlling family members, and 0 otherwise. See Appendix 4 for the list of negative events. All regressions include all control variables and year and industry fixed effects. The sample period is from 2002 to 2015. Robust standard errors are shown in parenthesis

*, **, and *** imply two-tail significance at 10, 5, and 1%, respectively

Additional Tests

Some researchers argue that errors within a firm-cluster are likely to be correlated and an additional observation in the cluster may not provide an independent piece of information, potentially leading to small standard errors (Gow et al. 2010). Hence, to improve the precision of inferences, one should use standard errors clustered on firms. Following Gow et al. (2010), we adopt clustered robust errors and report the results in Panel A of Table 9. The relation between CSR and ownership disparity remains negative and significant as before. However, the positive relation between CSR and business group affiliation remains positive and significant in top 10 and top 4 chaebol samples, but not in Group (top 30), implying that the effect of group affiliation on CSR is more pronounced in larger groups.

Table 9 Robustness check for the impact of business group affiliation on CSR

	Full sample			Group sample		
	(1)	(2)	(3)	(4)	(5)	(6)
Panel A: Based on clustered robust standard errors						
Group	0.087 (0.071)					
Group (top 10)		0.106* (0.063)			0.115 (0.070)	
Group (top 4)			0.116** (0.058)			0.131** (0.060)
Disparity				−0.393** (0.167)	−0.430*** (0.160)	−0.427*** (0.158)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	−1.616*** (0.330)	−1.625*** (0.325)	−1.728*** (0.300)	−0.889* (0.458)	−1.010** (0.442)	−1.180** (0.469)
N	549	549	549	389	389	389
Adj *R*-squared	0.377	0.388	0.391	0.447	0.467	0.475
Panel B: Based on clustered standard errors using wild cluster bootstrapping						
Group	0.087 (0.074)					
Group (top 10)		0.106 (0.077)			0.115 (0.095)	
Group (top 4)			0.116* (0.066)			0.131* (0.072)
Disparity				−0.393** (0.185)	−0.430** (0.197)	−0.427** (0.202)
Control variables	Yes	Yes	Yes	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes	Yes	Yes	Yes
Year FE	Yes	Yes	Yes	Yes	Yes	Yes
Constant	−2.569*** (0.911)	−2.649*** (0.940)	−2.795*** (0.992)	−1.847* (1.034)	−2.009** (0.975)	−2.212** (0.983)
N	549	549	549	389	389	389
Adj *R*-squared	0.377	0.388	0.391	0.447	0.467	0.475

Panel A presents panel regression results of CSR indices on business group affiliation. The dependent variable is CSR index, using the full sample for the column (1)–(3) and using business group subsample for the column (4)–(6). All regressions include all control variables and year and industry fixed effects. The sample period is from 2002 to 2015. Clustered robust standard errors are shown in parenthesis. Panel B presents panel regression results of CSR indices on business group affiliation based on clustered robust standard errors using wild cluster bootstrapping are shown in parenthesis

*, **, and *** imply two-tail significance at 10, 5, and 1%, respectively

To cope with the potential small sample problem further, we also conduct another robustness test using wild cluster bootstrapping, which takes into account the number of clusters (Cameron et al. 2008; Cameron and Miller 2015) that is specification-free.[9] The results based on wild cluster bootstrapping with 400 iterations, as recommended by Cameron and Miller (2015), are presented in Panel B of Table 9. The resulting standard errors are a bit larger, with lower significance level, but the signs and magnitude of all coefficients of group and disparity variables remain the same. The coefficients of ownership disparity on CSR are all negative and significant at 1%, but the positive relation between CSR and business group is significant only at 10% for top 4 group firms. Overall, our results of a negative association between CSR and ownership disparity are robust across different models and clustered robust standard errors, while the positive relation between CSR

[9] Notice also that the number of clusters in our sample is 82, which is greater than the threshold; small cluster problem generally arises with 20–50 clusters depending on the screening criteria (Cameron and Miller 2015).

and business group affiliation is most significant in top 4 chaebol firms.

Additional concern is whether the effect of business group affiliation may not proxy for the group's business relationship with the government. We tried to collect data on government contracts of group firms but to no avail. While anecdotal evidence suggests that large group firms participated in government infrastructure construction projects such as highway construction and others, no consistent set of data are available that would enable any empirical examination. To address this issue more formally, we made additional attempt by examining the patterns of revenues and transactions of four business groups that are government-controlled unlike the most that are family-controlled, out of the 30 largest groups we have used for chaebols in Korea (Table 1). These include POSCO controlled by government, KT privatized into diversified ownership but still with National Pension Services as the largest shareholder, and Daewoo Shipbuilding and Daewoo E&C controlled by financial institutions that are closely monitored by the government (unreported).

Similar question pertains to differing industry structure of business groups. The absolute majority of Korean chaebols are horizontal – even those whose names may appear to suggest being vertical are in fact horizontal ones. For instance, Hyundai Motors Group has 51 firms in 24 SIC 2-digit industries, and Daewoo Shipbuilding Group has 18 firms in 10 industries. We re-estimated the model excluding groups that have five industries or less including one that is single-industry based (S-Oil); the excluded groups (e.g., four in 2011 but one in 2015) as well as the top 30 groups changed over time. Our basic results remain intact.

Discussion and Conclusion

Despite a growing literature on CSR, the evidence on the effect of CSR engagement on the firm is still mixed. On one hand, various studies documented the positive effects of CSR on firm value under different institutional settings (Edmans 2011; Deng et al. 2013; Servaes and Tamayo 2013; Flammer 2015; Ferrell et al. 2016; Liang and Renneboog 2017). Other studies indicated gains in specific forms of market receptions: CSR leads to lower cost of capital (Dhaliwal et al. 2011); higher analyst following (Hong and Kacperczyk 2009); favorable analyst recommendations (Ioannou and Serafeim 2015); higher analyst forecast accuracy (Dhaliwal et al. 2012); and lower firm risk (Godfrey et al. 2009). On the other hand, some scholars maintain that CSR activity may decrease firm value, not only by wasting resources à la Friedman (1970), but by increasing managers' ability to exploit corporate resources opportunistically for their private gains (Pagano and Volpin 2005; Cronqvist et al. 2009; Masulis and Reza 2015). In addition, CSR can incur indirect cost when the firm becomes less flexible and operates at lower efficiency (Claessens and Yurtoglu 2013).

However, since these studies examine CSR from a strictly financial perspective, they do not take into consideration strategic benefits of CSR such as CSR being a facilitator for access to resources (Cochran and Wood 1984), or for creation of reputation capital and goodwill with the local community (Godfrey 2005). Moreover, such reputation capital can provide an insurance-like benefit in the event of a bad event (Godfrey 2009; Shiu and Yang 2017). The wide-ranging nature of these benefits and costs suggests that CSR is a multi-faceted activity, subject to interpretations by diverse set of stakeholders and under different institutional contexts.

Khanna and Palepu (2000) characterized emerging markets to be "institutional voids" because of the lack of well-functional institutional infrastructure, and argue that business groups can fill in such institutional voids by creating *de facto* institutions within the firm. Business groups, in effect, have become part of institutions in many emerging markets and in some developed countries where the stakeholder paradigm rather than shareholder maximization is the norm. In this paper, we examined the antecedents and outcomes of CSR behavior by group firms in Korea, where chaebols have been created in "institutional voids" and have become dominant economically. The nexus between CSR and business group has not been studied much in either literature on CSR or on business groups.

Specifically, this paper centered on two related questions: whether the CSR behaviors of group firms are different from those of non-group firms, and if so, whether and how such behaviors are related to the ownership disparity between cash flow and control, an important feature of the chaebol ownership structure. We make contributions in three research domains. First, we believe ours is the first paper that examines the nexus between CSR and business groups systematically in Korea. Some studies examine the relation between CSR and corporate governance (Jo and Harjoto 2011, 2012), as well as the relation between CSR and firm value (Edmans 2011; Jo and Harjoto 2011, 2012; Deng et al. 2013; Servaes and Tamayo 2013; Flammer 2015; Ferrell et al. 2016; Liang and Renneboog 2017). While other studies (e.g., Campbell and Keys 2002; Joh 2003; Baek et al. 2004; Choi et al. 2007) examine the effect of corporate governance on industrial firms in Korea, we are unaware of any study that focuses on the business group-CSR-ownership disparity-firm value linkage.

Second, we show that while CSR initiatives are positively associated with business group affiliation, there is a negative relationship between CSR and the ownership disparity. Both are new results. We also find that CSR activities are value-additive especially during the time of group-specific negative events, buffering from bad outcomes. This

insurance-like effect of CSR has been documented, without regard to business groups, recently by Shiu and Yang (2017). We argue and provide supporting evidence that such effect is more pronounced for group firms because of a group-wide negative reputational externality.

Third, we note that our study extends the CSR literature via its use of Thomson Reuters' ASSET4 database in measuring Korean CSR engagement. In contrast to narrow industry studies, or survey-based KLD database that fueled many empirical work, the ASSET4 database utilizes publicly available information extensively and undergoes systematic vetting and verification by Thompson Reuter analysts on an ongoing basis for CSR activities for firms around the world.[10]

Our empirical analysis has several limitations that may motivate future work. Our study focuses on the implications of group affiliation and the ownership disparity, neglecting other important factors that may influence CSR decisions, although we have included a long list of control variables. For instance, CSR activities may depend on the availability of capital to fund CSR activities, as well as social and political factors and of course accounting and legal considerations. It is likely that all these factors may exert some degree of influence on business group-CSR-value nexus, and some may even have greater influence than ownership disparity. In addition, the Korean coverage of ASSET4 is limited, and there could be sample selection bias. Although we have expanded our ASSET4 sample by collecting additional information for non-group firms for control purposes, our sample of Korean group and non-group firms may not be sufficiently large to arrive at definite conclusions.

We believe our results based on chaebols are generalizable to other emerging markets and even to some developed countries which have similar business group structure and similar stakeholder governance orientation. However, this is something that also needs to be confirmed by a global study. More importantly, the effects of country-level institutions such as formal and informal institutions including law, culture and finance in the context of differing corporate ownership and governance structure is wide open globally, especially at the level of disaggregate CSR categories.

Finally, we note potential effects of perceptions versus substance in corporate announcement. For instance, it is possible that business group firms with a larger ownership disparity are more likely to use CSR as a strategy to enhance their public images more than those with less ownership disparity. Similarly, we cannot discount the possibility that business group firms practice "greenwashing," making unsubstantiated or misleading claims about the real environmental benefits of their products and technologies that may make them look better than they really are. This difference between the perception and substance underlies all corporate announcements including CSR disclosures. This is well beyond the scope of this paper but is a deeper issue on the motivation of corporate disclosure that needs to be thought out in future research on corporate disclosures.

Despite these limitations, we believe our findings of a positive association between the CSR engagement and business group affiliation and of a negative association between the CSR and the ownership disparity are remarkable. We believe this is an important first step toward understanding how the business group structure influences CSR decisions in emerging markets. Future studies can investigate the implications of business groups and CSR in cross-country and intertemporal contexts and incorporating various formal and informal institutional factors that are given in this paper.

Acknowledgements Jo appreciates sabbatical support of Leavey School of Business at Santa Clara University. We appreciate two anonymous referees for their many valuable comments and detailed guidance. This paper was initiated when Jimi Kim was at Temple University.

Compliance with ethical standards

Conflict of interest All authors declare that they have no conflict of interest.

Ethical approval This article does not contain any studies with human participants or animals performed by any of the authors.

Appendix 1: A Simple Theoretical Model

There are two types of agency problem when it comes to CSR and corporate governance. Type I agency problem refers to the conflict of interests between managers and shareholders, and type II agency problem indicates those between controlling inside shareholders (such as founding family) and non-controlling outside minority shareholders. In this paper, we focus on type II agency problem.

Johnson et al. (2000) argue that measures of CSR and corporate governance, particularly the effectiveness of minority investor protections, can better explain the magnitude of depreciation and stock market decline in emerging markets open to capital flows during the Asian financial crisis of 1997–1998 than do standard macroeconomic variables. They further claim that in countries with weak corporate governance, worse

[10] Although the KLD data have been used extensively in research on accounting, economics, finance and management for many years, they have been criticized because of their binary and qualitative nature. In addition, the KLD data have an unbalanced panel structure, and may suffer from selection bias due to non-proportional coverage. For instance, large U.S. manufacturing firms are over-represented relative to their importance in the economy. Mishra and Modi (2013) and Chatterji et al. (2016) argue that this may dampen the generalizability of empirical findings based on the KLD database.

economic prospects result in more expropriation by managers and thus a larger fall in stock prices. To support their claim, they construct a simple static theoretical model that helps understand the basic logic as to how corporate governance affects firm value. While Johnson et al. (2000) use type I agency problem, we modify it to type II agency problem and incorporate CSR.

Let α denotes the shares of controlling shareholders and $(1-\alpha)$ those of minority shareholders. S indicates the amount of money the controlling shareholders attempt to transfer from the minority shareholders, i.e., transfer resources from a long-term oriented CSR project to a short-term profit-oriented project or to a project in the private interest of controlling insiders, increasing the probability of opportunistic rent-seeking. The cost function for the transferring money is assumed as

$$C(S) = \frac{S^2}{2k} \tag{A1}$$

The k term denotes the weakness of CSR engagement as well as corporate governance: the higher value of k represents the cost of weak CSR or corporate governance. Let I be retained earnings and R be gross rate of return. We can then see that the utility function for the controlling insider is

$$U = \alpha R(1 - S) + S - \frac{S^2}{2k} \tag{A2}$$

If we differentiate the utility function with respect to S,

$$\frac{\partial U}{\partial S} = \alpha R + 1 - \frac{S^*}{k} = 0 \tag{A3}$$

Then, the optimal amount of money the controlling shareholder could transfer should be

$$S^* = k(1 - \alpha R) \tag{A4}$$

Now the firm value, V, can be expressed as,

$$V = R(1 - S^*) = R[I - k(1 - \alpha R)] \tag{A5}$$

When we differentiate the firm value with respect to k, we find that

$$\frac{\partial V}{\partial k} = R(\alpha R - 1) \tag{A6}$$

This result can be interpreted as follows.

If $\alpha R - 1 > 0$, then

$$\frac{\partial V}{\partial k} > 0 \tag{A7}$$

On the other hand, if $\alpha R - 1 < 0$, then

$$\frac{\partial V}{\partial k} < 0 \tag{A8}$$

This means that when $\alpha^* R$ are larger (smaller) than one, the weakness of corporate governance or CSR will have a positive (negative) impact on firm value. The smaller α means bigger ownership disparity between controlling shareholders and minority shareholders, and the smaller R means that the firms are suffering a weaker value.

Our modified static model shows that CSR could play a major effect on firm value provided that corporate governance is a subset of CSR. Based on theoretical intuition given by Johnson et al. (2000), we postulate a proposition that the value of group firms is more significantly and negatively affected by ownership disparity than non-group firms, especially when the ownership disparity is large (smaller α) and controlling shareholders attempt tunneling such as transferring funds from a long-term oriented CSR project to a project for private benefit by the controlling insider.

Appendix 2: ASSET4 CSR composition

Corporate social responsibility (CSR) composition

	Pillars	Categories
CSR	Corporate governance performance (5 categories)	Board structure (11 items)
		Compensation policy (13 items)
		Board functions (13 items)
		Shareholders rights (34 items)
		Vision and strategy (10 items)
	CSR_E (environmental) performance (3 categories)	Resource reduction (32 items)
		Emission reduction (41 items)
		Product innovation (25 items)
	CSR_S (society) performance (7 categories)	Employment quality (11 items)
		Health and safety (26 items)
		Training and development (8 items)
		Diversity (11 items)
		Human rights (13 items)
		Corporate community involvement (30 items)
		Product responsibility (41 items)

Appendix 3: Variable definitions and data sources

CSR variables	
CSR	Equally weighted average of the social and environmental index (ASSET4)
CSR_E (environmental)	A company's impact on living and non-living natural systems, including the air, land and water, as well as complete ecosystems
Emission reduction	A company's management commitment and effectiveness towards reducing environmental emission in the production and operational processes
Resource reduction	A company's management commitment and effectiveness towards achieving an efficient use of natural resources in the production process
Product innovation	A company's management commitment and effectiveness towards supporting the research and development of eco-efficient products or services
CSR_S (society)	A company's capacity to generate trust and loyalty with its workforce, customers and society, through its use of best management practices
Employment quality	A company's management commitment and effectiveness towards providing high-quality employment benefits and job conditions
Health & safety	A company's management commitment and effectiveness towards providing a healthy and safe workplace
Training & development	A company's management commitment and effectiveness towards providing training and development (education) for its workforce
Diversity	A company's management commitment and effectiveness towards maintaining diversity and equal opportunities in its workforce
Human rights	A company's management commitment and effectiveness towards respecting the fundamental human rights conventions
Community	A company's management commitment and effectiveness towards maintaining the company's reputation within the general community
Product responsibility	A company's management commitment and effectiveness towards creating value-added products and services upholding the customer's security
Firm value variable	
Tobin's Q	The sum of the market value of common stock, the book value of preferred stock and total debts, divided by the book value of total assets
Business group variables	
Group	A dummy variable to indicate whether a firm belongs to one of the 30 largest business groups in South Korea. The Korea Fair Trade Commission (KFTC) updates the list of the 30 largest business groups annually (Group OPNI)
Group (Top 10)	A dummy variable to indicate whether a firm belongs to one of the 10 largest business groups in South Korea (Group OPNI)
Disparity	The disparity between control ownership and cash flow ownership of the controlling shareholder in a group firm (Group OPNI)
After negative event	A dummy variable to indicate whether a firm belongs to one of the business groups which underwent negative events (Maeil Kyungjae Daily News)
Firm-specific variables	
Firm age	The numbers of years since a firm's founding date (DART)
Firm size	The natural log of the total assets of a firm in South Korean won (Worldscope and DART)
Debt ratio	The ratio of total debts to total assets of a firm (Worldscope and DART)
Current ratio	The ratio of current assets to current liabilities of a firm (Worldscope and DART)
R&D intensity	The ratio of the research and development expenditures to total sales of a firm (Worldscope and DART)
Governance index	Korean Corporate Governance Institute (KCGI) index provided by Korean Corporate Governance service, using the normalized the KCGI index scores

CSR variables	
Export to total assets	Export divided by total assets to control for firm's internationalization magnitude (Compustat Global)

The Group OPNI dataset further provides group affiliation, variables necessary to compute group firms' ownership disparity, group ranking, number of firms in the group, types of controlling group owners, and industry information of firms in the group

Appendix 4: The list of negative events of groups

Group name	Year	News
CJ	2013	The Chairman of CJ Group was sentenced for embezzlement, breach of trust and tax evasion
Daewoo Shipping	2010	CEO Daewoo Shipbuilding & Marine Engineering, Mr. Nam was prosecuted and later convicted on charges of expropriation
Doosan	2009	Former Chairman committed suicide after the "brothers' war" and his business failure
Hanwha	2010	Chairman's third son was arrested on charge of sexual assault. After this, the Chairman's second son was arrested in charge of hit-and-run in 2011
	2012	The Chairman was sentenced to four years in prison and fined $4.5 million for embezzlement
Hanjin	2015	Korean Air scandal in which Ms. Cho, Hyun-ah, an airline senior executive and daughter of the company's Chairman, asked the flight's chief steward to kneel before her due to minor mistake. Ms. Cho was eventually sentenced to one year in prison for violation of airline code
Hyosung	2010	The Chairman's second son was prosecuted on charge of embezzlement of 6.4 billion Korean Won (KRW)
Hyundai Motors	2006	Revelation of Secret fund. This caused a prison sentence for the Chairman for three years. Hyundai Motors group was accused of illegal bribing of a sub-contractor in 2011 again
Kumho Asiana	2011	The Chairman's borrowed-name bank accounts were revealed (valuing total of 6–10 billion KRW). During that period, the business group had suffered from serious financial distress
LG	2010	Entire recall of 'Drum Washing Machine' due to a child's fatal incident
Lotte	2009	Spread of a rumor about political and business circle related to the second Lotte World construction project. In 2010, Lotte started court dispute with Crown, a major competitor in food manufacturing and distribution
	2015	Brothers in the founding family squabble. Son ousts father in boardroom coup. Father strikes back. That is the gist of the family drama plaguing retail and hotel giant, Lotte Group, the fifth-largest chaebol, in South Korea
Posco	2009	Suspicion that the government intervened in the process of appointment of Chairman
Samsung	2005	Accusation from NGO that the Chairman inherited convertible bonds to his son illegally to avoid inheritance tax. This was followed by investigation into secret fund of the group (2008) and special inspection was initiated by Congress (2008)
	2008	Lee Jae-Yong, an heir to the Group, and his two sisters inherited convertible bonds at below-market prices
	2009	Chairman Lee was convicted for tax evasion
	2012	Family feud
	2015	Sabotage, espionage, succession battles, bribes, and sibling rivalries in the founding family
SK	2008	Chainman was sentenced a stay of execution with dereliction of duty, followed by the event that the Chairman's family was seized and searched by the prosecutor on charges of embezzlement
	2013	Group Chairman was convicted of misappropriation of $43.6 million from two of the SK Group affiliates to make personal investments in stock futures and options
SSG	2010	Minority shareholders of SSG filed a compensation lawsuit against Vice Chairman of the group, Chairwoman's son, for 18.9 billion KWR

References

Aaker, D. A. (2004). *Brand portfolio strategy*. New York: The Free Press.

Almeida, H. V., Park, S. Y., Subrahmanyam, M. G., & Wolfenzon, D. (2011). The structure and formation of business groups: Evidence from Korean chaebols. *Journal of Financial Economics, 99*(2), 447–475.

Almeida, H. V., & Wolfenzon, D. (2006). A theory of pyramidal ownership and family business groups. *Journal of Finance, 61*(6), 2637–2680.

Ararat, M., Black, B. S., & Yurtoglu, B. B. (2015). Corporate governance, business groups, and market value: Time-series evidence

from Turkey (June 11, 2014). *Northwestern Law & Econ Research Paper No. 13–19; ECGI—Finance Working Paper*. Retrieved from SSRN: http://ssrn.com/abstract=2277768. https://doi.org/10.2139/ssrn.2277768.

Attig, N., El Ghoul, S., Guedhami, O., & Suh, S. (2013). Corporate social responsibility and credit Ratings. *Journal of Business Ethics, 117*, 679–694.

Avetisyan, E., & Ferrary, M. (2013). Dynamics of stakeholders' implications in the institutionalization of the CSR field in France and in the United States. *Journal of Business Ethics, 115*(1), 115–133.

Backhaus, K., Stone, B., & Heiner, K. (2002). Exploring the relation between corporate social performance and employer attractiveness. *Business and Society, 41*, 292–318.

Baek, J., Kang, J., & Park, K. (2004). Corporate governance and firm value: Evidence from the Korean financial crisis. *Journal of Financial Economics, 71*(2), 265–313.

Barnea, A., & Rubin, A. (2010). Corporate social responsibility as a conflict between shareholders. *Journal of Business Ethics, 97*(1), 71–86.

Barnett, M., & Salomon, R. (2006). Beyond dichotomy: The curvilinear relation between social responsibility and financial performance. *Strategic Management Journal, 27*, 1101–1122.

Barth, M. E., Clement, M., Foster, G., & Kasznik, R. (1998). Brand values and capital market valuation. *Review of Accounting Studies, 3*(1–2), 41–68.

Bebchuk, L. A., & Neeman, Z. (2010). Investor protection and interest group politics. *Review of Financial Studies, 23*(3), 1089–1119.

Berman, S., Wicks, A., Kotha, S., & Jones, T. (1999). Does stakeholder orientation matter? The relation between stakeholder management models and firm financial performance. *Academy of Management Journal, 42*(5), 488–506.

Bertrand, M., & Mullainathan, S. (2003). Enjoying the quiet life? Corporate governance and managerial preferences. *Journal of Political Economy, 111*, 1043–1075.

Black, B. S., Jang, H., & Kim, W. (2006). Does corporate governance predict firms' market values? Evidence from Korea. *Journal of Law, Economics, and Organization, 22*(2), 366–413.

Blazovich, J. L., & Smith, L. M. (2011). Ethical corporate citizenship: does it pay? *Research on Professional Responsibility and Ethics in Accounting, 15*, 127–163.

Brammer, S., Jackson, G., & Matten, D. (2012). Corporate social responsibility and institutional theory: new perspectives on private governance. *Socio-Economic Review, 10*, 3–28.

Cameron, C., Gelbach, G., & Miller, D. (2008). Bootstrap-based improvements for inference with clustered errors. *Review of Economics and Statistics, 90*, 414–427.

Cameron, C., & Miller, D. (2015). A practitioner's guide to cluster-robust inference. *Journal of Human Resources, 50*(2), 317–372.

Campbell, I. I., T. L., & Keys, P. Y. (2002). Corporate governance in South Korea: the chaebol experience. *Journal of Corporate Finance, 8*, 373–391.

Campbell, J. L. (2007). Why would corporations behave in socially responsible ways? An institutional theory of corporate social responsibility. *Academy of Management Review, 32*(3), 946–967.

Cao, Z., & Narayanamoorthy, J. (2011). The effect of litigation risk on management earnings forecast. *Contemporary Accounting Research, 28*(1), 125–173.

Carroll, A. B. (1979). A three-dimensional conceptual model of corporate performance. *Academy of Management Review, 4*(4), 497–505.

Carroll, A. B. (1991). The pyramid of corporate social responsibility: toward the moral management of organizational stakeholders. *Business horizons, 34*(4), 39–48.

Carroll, A. B. (1999). Corporate social responsibility evolution of a definitional construct. *Business & Society, 38*(3), 268–295.

Chang, S. J., Chung, C. N., & Mahmood, I. P. (2006). When and how does business group affiliation promote firm innovation? A tale of two emerging economies. *Organization Science, 17*(5), 637–656.

Chang, S. J., & Hong, J. (2000). Economic performance of group-affiliated companies in Korea: Intragroup resource sharing and internal business transactions. *Academy of Management Journal, 43*(3), 429–448.

Chatterji, A., Durand, R., Levine, D. I., & Touboul, S. (2016). Do ratings of firms converge? Implications for managers, Investors and Strategy Researchers. *Strategic Management Journal, 37*(8), 1597–1614.

Cheng, B., Ioannou, I., & Serafeim, G. (2014). Corporate social responsibility and access to finance. *Strategic Management Journal, 35*(1), 1–23.

Chiang, M. (2016). Chaebol's role in South Korea's economic development. EAI Background Brief No. 1153.

Choi, J., & Jiang, C. (2009). Does the multinationality matter? Implications for operational hedging for the exchange risk exposure. *Journal of Banking and Finance, 33*(11), 1973–1982.

Choi, J., & Papaioannou, M. (2010). Financial crisis and risk management: Reassessing the Asian financial crisis in light of the American financial crisis. *East Asia Law Review, University of Pennsylvania Law School, 5*(3), 442–468.

Choi, J., Park, S., & Yoo, S. (2007). The value of outside directors: Evidence from corporate governance reform in Korea. *Journal of Financial and Quantitative Analysis, 42*(4), 941–962.

Chung, K., & Jo, H. (1996). The impact of security analysts' monitoring and marketing functions on the market value of firms. *Journal of Financial and Quantitative Analysis, 31*, 493–512.

Claessens, S., Djankov, S., & Lang, L. (2000). The separation of ownership and control in east Asian corporation. *Journal of Financial Economics, 58*, 81–112.

Claessens, S., Djankov, S., & Lang, L. (2002). Disentangling the incentive and entrenchment effects of large shareholders. *Journal of Finance, 57*, 2741–2771.

Claessens, S., & Yurtoglu, B. (2013). Corporate governance in emerging markets: a survey. *Emerging Markets Review, 15*, 1–33.

Clarkson, P. M., Li, Y., Richardson, G. D., & Vasvari, F. P. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society, 33*(4), 303–327.

Cochran, P. L., & Wood, R. (1984). Corporate social responsibility and financial performance. *Academy of Management Journal, 27*, 42–56.

Cronqvist, H., Heyman, F., Nilsson, M., Svaleryd, H., & Vlachos, J. (2009). Do entrenched managers pay their workers more? *Journal of Finance, 64*(1), 309–339.

Deng, X., Kang, J. K., & Low, B. S. (2013). Corporate social responsibility and stakeholder value maximization: Evidence from mergers. *Journal of Financial Economics, 110*(1), 87–109.

Dhaliwal, D. S., Li, O. Z., Tsang, A., & Yang, Y. G. (2011). Voluntary nonfinancial disclosure and the cost of equity capital: The initiation of corporate social responsibility reporting. *The Accounting Review, 86*(1), 59–100.

Dhaliwal, D. S., Radhakrishnan, S., Tsang, A., & Yang, Y. G. (2012). Nonfinancial disclosure and analyst forecast accuracy: International evidence on corporate social responsibility disclosure. *The Accounting Review, 87*(3), 723–759.

Dunning, J. (1980). Towards an eclectic theory of international production. *Journal of International Business Studies, 11*(1), 9–31.

Edmans, A. (2011). Does the stock market fully value intangibles? Employee satisfaction and equity prices. *Journal of Financial Economics, 101*, 621–640.

El Ghoul, S., Guedhami, O., & Kim, Y. (2017). Country-level institutions, firm value, and the role of corporate social responsibility initiatives. *Journal of International Business Studies, 48*(3), 360–385.

El Ghoul, S., Guedhami, O., Kwok, C., & Mishra, D. (2011). Does corporate social responsibility affect the cost of capital? *Journal of Banking and Finance, 35*(9), 2388–2406.

Ferrell, A., Liang, H., & Renneboog, L. (2016). *Socially responsible firms. Journal of Financial Economics, 122*(3), 585–560. Retrieved from http://www.sciencedirect.com/science/article/pii/S0304405X16301519.

Flammer, C. (2015). Does corporate social responsibility lead to superior financial performance? A regression discontinuity approach. *Management Science, 61*(11): 2549–2568.

Freeman, R. E., Wicks, A. C., & Parmar, B. (2004). Stakeholder theory and "the corporate objective revisited. *Organization Science, 15*(3), 364–369.

Friedman, M. (1970, September 13). The social responsibility of business is to increase profit. New York Times Magazine, 32–33.

Frooman, J. (1999). Stakeholder influence strategies. *Academy of Management Review, 24*, 191–206.

Godfrey, P. (2009). The relationship between corporate social responsibility and shareholder value: an empirical test of the risk management hypothesis. *Strategic Management Journal, 45*, 425–445.

Godfrey, P. C. (2005). The relation between corporate philanthropy and shareholder wealth: A risk management perspective. *Academy of Management Review, 30*, 777–798.

Godfrey P. C., Merrill C. B., & Hansen J. M. (2009). The relationship between corporate social responsibility and shareholder value: An empirical test of the risk management hypothesis. *Strategic Management Journal, 30*(4), 425–445.

Gompers, P., Ishii, J., & Metrick, A. (2010). Extreme governance: an analysis of dual-class firms in United States. *Review of Financial Studies, 23*(3), 1051–1088.

Gow, I., Ormazabal, G., & Taylor, D. (2010). Correcting for cross sectional and time series dependence in accounting research. *The Accounting Review, 85*(2), 483–512.

Haley, U. (1991). Corporate contributions as managerial masques: Reframing corporate contributions as strategies to influence society. *Journal of Management Studies, 28*, 485–509.

Hong, H., & Kacperczyk, M. (2009). The price of sin: The effects of social norms on markets. *Journal of Financial Economics, 93*(1), 15–36.

Ioannou, I., & Serafeim, G. (2012). What drives corporate social performance? The role of national-level institutions. *Journal of International Business Studies, 43*, 1–31.

Ioannou I., & Serafeim G. (2015). The impact of corporate social responsibility on investment recommendations: Analysts' perceptions and shifting institutional logics. *Strategic Management Journal, 36*(7), 1053–1081.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. *Journal of Financial Economics, 3*, 305–360.

Jo, H., & Harjoto, M. A. (2011). Corporate governance and firm value: The impact of corporate social responsibility. *Journal of Business Ethics, 103*(3), 351–383.

Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics, 106*(1), 53–72.

Joh, S. W. (2003). Corporate governance and firm profitability: evidence from Korea before the economic crisis. *Journal of Financial Economics, 68*(2), 287–322.

Johnson, S., Boone, P., Breach, A., & Friedman, E. (2000). Corporate governance in the Asian financial crisis. *Journal of Financial Economics, 58*(1), 141–186.

Khana, T., & Rivkin, J. (2001). Estimating the performance effects of business groups in emerging markets. *Strategic Management Journal, 22*(1), 45–74.

Khanna, N., & Tice, S. (2001). The bright side of international capital markets. *Journal of Finance, 56*(4), 1489–1528.

Khanna, T., & Palepu, K. (2000). Is group affiliation profitable in emerging markets? An analysis of diversified Indian business groups. *Journal of Finance, 55*(2), 867–891.

Khanna, T., & Yafeh, Y. (2007). Business groups in emerging Markets: Paragons or parasites? *Journal of Economic Literature, 45*(2), 331–372.

Kitzmueller, M., & Shimshack, J. (2012). Economic perspectives on corporate social responsibility. *Journal of Economic Literature, 50*, 51–84.

Krueger, A. (1974). The political economy of the rent seeking society. *American Economic Review, 64*, 291–303.

La Porta, R., Lopez-de-Silanes, F., & Shleifer, A. (1999). Corporate ownership around the world. *Journal of Finance, 54*(2), 471–517.

La Porta, R., Lopez-de-Silanes, F., Shleifer, A., & Vishny, R. W. (2002). Investor protection and corporate valuation. *Journal of Finance, 57*, 1147–1170.

Liang, H., & Renneboog, L. (2017). On the foundations of corporate social responsibility. *Journal of Finance, 72*(2), 853–910.

Luo, X., Wang, H., Raithel, S., & Zheng, Q. (2015). Corporate social performance, analyst stock recommendations, and firm future returns. *Strategic Management Journal, 36*(1), 123–136.

Masulis, R. W., & Reza, S. W. (2015). Agency problems of corporate philanthropy. *Review of Financial Studies, 28*(2), 592–636.

McWilliams, A., & Siegel, D. (2001). Corporate social responsibility: A theory of the firm perspective. *Academy of Management Review, 28, 117*–127.

Mishra, S., & Modi, S. (2013). Positive and negative corporate social responsibility, financial leverage, and idiosyncratic Risk. *Journal of Business Ethics, 117*(2), 431–448.

Mitton, T. (2002). A cross-firm analysis of the impact of corporate governance on the East Asian financial crisis. *Journal of Financial Economics, 64*(2), 215–241.

Morck, R., & Nakamura, M. (2000). Banks, ownership structure, and firm value in Japan. Journal of Business, 73(4).

Murillo, D., & Sung, Y.-d. (2013). Understanding Korean capitalism: Chaebols and their corporate governance. Working paper. ESADEgeo position paper 33.

Nenova, T. (2003). The value of corporate votes and control benefits: A cross-country analysis. *Journal of Financial Economics, 68*, 325–351.

North, D. (1990). *Institutions, institutional change, and economic performance*. New York: Cambridge University Press.

Pagano, M., & Volpin, P. F. (2005). Managers, workers, and corporate control. *Journal of Finance, 60*(2), 841–868.

Park, K., Bae, K., & Cho, J. (2006). Analyses on performance by different types of investors in Korean stock market. *Asia-Pacific Journal of Financial Studies, 35*, 41–76.

Patten, D. M. (2002). The relation between environmental performance and environmental disclosure: a research note. *Accounting, Organizations and Society, 27*(8), 763–773.

Scharfstein, D. S., & Stein, J. (2000). The dark side of international capital markets: Segmental rent seeking and inefficient investments. *Journal of Finance, 55*, 2537–2564.

Semenova, N., & Hassel, L. G. (2015). On the validity of environmental performance metrics. Journal of Business Ethics (in press).

Servaes, H., & Tamayo, A. (2013). The impact of corporate social responsibility on firm value: The role of customer awareness. *Management Science, 59*(5), 1045–1061.

Shiu, Y., & Yang, S. (2017). Does engagement in corporate social responsibility provide strategic insurance-like effects? *Strategic Management Journal, 38*, 455–470.

Shleifer, A., & Vishny, R. W. (1997). A survey of corporate governance. *Journal of Finance, 52*(2), 737–783.

Siegal, J., & Choudhury, P. (2012). A reexamination of tunneling and business groups. *Review of Financial Studies, 25*(6), 1763–1798.

Skinner, D. J. (1994). Why firms voluntarily disclose bad news. *Journal of Accounting Research, 32*, 38–60.

Tobin, J. (1958). Estimation of relationships for limited dependent variables. *Econometrica, 26*, 24–36.

White, H. (1980). A heteroscedasticity-consistent covariance matrix estimator and a direct test for heteroscedasticity. *Econometrica, 48*, 817–838.

Wooldridge, J. M. (2002). *Econometric analysis of cross section and panel data*. Cambridge, MA: MIT Press.

Yanagimachi, I. (2014). Chaebol reform and corporate governance in Korea. Working paper. Keio University.

Zhang, L., Sjogren, H., & Kishida, M. (2016). The emergence and organizational persistence of business groups in China, Japan, and Sweden. *Industrial and Corporate Change, 25*(6), 885–902.