ESG Reputational Risk in Family Firms: Evidence from Korean *Chaebols*[*]

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* This work was financially supported by Hansung University.

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ABSTRACT

We identify family succession as a novel determinant of the firm's exposure to reputational risk in ESG practices, as captured by negative media coverage. Using a sample of South Korean *chaebol* firms from 2007 to 2015, we find that *chaebol* firms that undergo business succession exhibit greater negative ESG media exposure than *chaebol* firms without succession or non-*chaebol* firms. Moreover, ESG reputational risk is greater for *chaebol* firms with controlling shareholders' high cash-flow rights, family disputes over management, and high related-party transactions. Consequently, *chaebol* firms, at a higher risk of suffering ESG reputational damage, tend to increase their donations or disclose their sustainability reports voluntarily but are less engaged in fraudulent or entertainment activities. We interpret this behavior as a strategic attempt by *chaebol* firms to preserve socio-emotional wealth (SEW) gains during the time of business succession.

Keywords: ESG reputational risk, family firm, *chaebol*, succession, socio-emotional wealth

JEL classification: G32, G34

1. Introduction

Environmental, Social, and Governance (ESG) related risks have attracted tremendous attention from market participants and academic researchers across various business disciplines.[1] A growing body of literature indicates that firms' ESG risk profiles can be attributed to various factors, including ownership (Abeysekera and Fernando, 2020; Chen et al., 2020; El Ghoul et al., 2016; Fernando et al., 2017; Hwang et al., 2022; Li et al., 2021), CEO/board leadership (Borghesi et al., 2014; Cronqvist and Yu, 2017; Hegde and Mishra, 2019; McCarthy et al., 2017; McGuinness et al., 2017; Zhang & Wong, 2022), and market characteristics (Borghesi et al., 2014; Cai et al., 2016; Di Giuli and Kostovetsky, 2014; Jha and Cox, 2015; Liang and Renneboog, 2017).

Despite a considerable body of research on the influence of different factors on ESG risk, there is scant evidence in the literature linking ESG reputational risk and family firms. Specifically, the literature has not yet explored family succession events as determinants of family firms' ESG reputational risk, particularly arising from media coverage. Our research fills this gap by examining how family succession is associated with ESG reputational risk and its implications for control transfer processes in family firms. Additionally, we offer empirical evidence on the strategic behaviors that family firms adopt to offset negative ESG reputation loss at the time of succession.

We focus on Korean *chaebols*, which are often the focus of intense media scrutiny. Korean *chaebol* firms undergoing succession may be more exposed to ESG risks due to high inheritance

[1] ESG refers to a set of criteria evaluating a company's sustainability and ethical impact. The concept entered mainstream awareness through the 2004 UN Global Compact report, "Who Cares Wins," which emphasized the importance of integrating ESG factors into financial markets to promote responsible and sustainable investment practices.

tax rate (Shin, 2020)[2] and their pyramidal ownership structure. To avoid high inheritance taxes, Korean *chaebols* have implemented alternative transfer of control to heirs through intragroup mergers (Wall Street Journal, August 25, 2017) or related-party transactions (Korea Herald, May 19, 2010). In addition, under the pyramidal ownership structure, *chaebol* families control the entire business with disproportionately small stakes in a few strategically important firms (Almeida et al., 2011; Shin 2020). Given the steep option-like payoff structure, succession conflicts among *chaebol* heirs are more likely to occur (Lee et al., 2023; Gam et al., 2020), which are exposed to heightened media scrutiny.

According to Chaebul.com, which tracks *chaebols*' succession issues, roughly half of the top 40 *chaebols* are involved in disputes over founders' succession plans. For example, one of the highest-profile battles splintered the Hyundai Group, the second largest Korean *chaebol*, into three parts, as sons of the founder sparred for control in the early 2000s (*Wall Street Journal*, April 3, 2000)[3] and such family feud lasted over a decade (*Wall Street Journal*, November 11, 2010)[4]. Following media reports about a succession dispute between the two potential heirs of the Lotte group, the fifth-largest Korean *chaebol*, Lotte shopping lost 8% of its market capitalization in just over a week. (*Economist*, August 15, 2015; *CNBC*, August 5, 2015)[5,6]. Similarly, the succession dispute at the Doosan group, the maker of South Korea's nuclear reactors, lasted for years before

[2] According to Shin (2020), the max inheritance tax rate in South Korea is the second highest among the OECD countries as 50% and up to 30% of additional business premium tax can be imposed in case the *chaebol* family is the largest shareholder.
[3] Jane L. Lee, "Brothers' Power Struggle at Hyundai Leads to Embarrassment, Restructuring," *The Wall Street Journal* (April 3, 2000).
[4] Evan Ramstad, "Fighting Over Hyundai Comes to a Head," *The Wall Street Journal* (November 11, 2010).
[5] *Economist*, "A Whole Lotte Drama: a fraternal feud over inheritance fires up South Koreans and regulators," (August 15, 2015).
[6] Nyshka Chandran, "Vicious South Korean family feud exposes chaebol peril," *CNBC* (August 5, 2015).

the interested parties reached a modus vivendi after the unfortunate suicide of one of them. (*Wall Street Journal*, August 10, 2015).[7]

Using a sample of 2,245 firm-year observations in South Korea from 2007 to 2015, we find that *chaebol* firms that undergo business succession[8] are more susceptible to negative media coverage, which reflects their higher exposure to reputational risks related to ESG factors, compared to non-*chaebol* firms or *chaebol* firms that do not undergo succession. Although measuring a firm's reputation is difficult, we gauge the reputational risk of ESG issues as a viable alternative. Baloria & Heese (2018) argue that regarding a firm's irresponsible behavior, the media can impact a firm's reputational capital by publicly scrutinizing and disciplining its actions.

We collect RepRisk data that dynamically quantify a firm's exposure to reputational risk related to ESG issues covered by media (e.g., major print media, blogs, social media).[9] RepRisk's measures capture firms' exposure to reputational risks, but not their actual level of reputation (RepRisk 2016, p. 7). RepRisk reports a monthly-updated score (*RRI*, or *Reputational Risk Index*, in the database). As a primary proxy for the firm's overall ESG reputational risk exposure, we use the highest level of the RepRisk score over the last two years. RepRisk suggests that when analyzing and comparing firms along with their ESG risk exposure, the highest level of the score

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[7] Donald Kirk, "Putting a Stop to South Korea's Family Empire," *The Wall Street Journal* (August 15, 2015).

[8] A *chaebol* family succession planning period typically spans over decades. Potential young heirs are strategically placed in key positions within the *chaebol* groups, allowing them to gain extensive training and experience within the company before assuming leadership roles. Once in leadership role, *chaebol* families help heirs secure the controlling shareholder position in strategically important firms to consolidate their control over the business groups. According to Economic Reform Report 2012-18, published by *Economic Reform Research Institute* (September 13, 2012), it takes an average of 6.57 years for *chaebol* heirs to be appointed to a senior position, 14.78 years to be a CEO, and 26.48 years to be a group chairman in *chaebol* groups.

[9] The RepRisk score is created based on the severity, reach, and novelty of the ESG issues, and ranges from 0 to 100. A higher value indicates a higher ESG risk exposure through various media outlets. RepRisk states that the severity, reach, or novelty is evaluated by investigating the sources of information (e.g., international media vs. local media), which likely affect the firm's ESG reputation (i.e., more high profile the media, the more serious damage that affects the firm's reputation) (https://www.reprisk.com/). Thus, we assess the firm's ESG reputational risk using the RepRisk data, similar to recent studies (Asante-Appiah & Tamara, 2022; Zang & Wong, 2022).

(i.e., the maximum media values) over the last two years better captures overall ESG and business risk exposure than the annualized average score.[10]

Our main analysis shows that *chaebol* firms have an average ESG reputational risk (*RepRisk*) that is 27.68% higher than non-*chaebol* firms, and *chaebol* firms that have undergone succession have an average ESG reputational risk that is 28.71% higher than *chaebol* firms without succession. We also find similar patterns for three categories of reputational risk issues: environmental, social, and governance.

We conduct a conditional analysis to further verify the relationship between ESG reputational risk and family firms that undergo business succession. Pyramidal ownership structures are prevalent among Korean *chaebols*. Under these pyramidal ownership structures through circular shareholdings, controlling shareholders manage the entire business while holding disproportionately small stakes in a few key firms (Almeida et al., 2011; Shin 2020). Therefore, firms with heavily concentrated direct ownership are more likely to experience succession issues.

In addition, during *chaebol* successions, the winning party of the succession dispute acquires the controlling stakes in strategically important firms, ultimately gaining control over the entire business group. Given the steep option-like payoff structure during the succession process in Korean *chaebols*, intense management disputes among *chaebol* heirs are more likely to occur (Lee et al., 2023; Gam et al., 2020).

[10] According to RepRisk, their score is highly responsive to new risks. This means that when a new risk incident occurs, the score for companies with little or no prior exposure will be impacted more significantly than that of companies with frequent prior exposure. RepRisk score decays over time, when no new risk incidents are observed, and will become zero in a maximum of two years. When two firms have the same RepRisk score, stakeholders are more likely to react to the firm's exposure to a new risk incident than to a firm's exposure with little or no prior history of exposure.

Finally, in South Korea's regulatory environment, characterized by a high inheritance tax rate[11] and the absence of dual-class ownership, *chaebol* families seek alternative succession methods, such as related-party transactions (Cho et al., 2023; Hwang & Kim, 2016). Consistent with our expectations, we find that positive correlations between succession events and ESG reputational risk are more significant for family firms where controlling owners have higher cashflow rights, face family disputes over management, and engage in high related party transactions. These results suggest that family succession is a critical driver of ESG reputational risk in family firms, especially in Korea.

Next, we investigate how *chaebols* respond to such high ESG reputational risk during succession periods. Based on the socio-emotional wealth (SEW) view[12], family firms that undergo the succession process are expected to avoid morally hazardous problems, with controlling families focusing on preserving their own reputation and social capital. Consistent with our expectation, *chaebol* firms seeking to ensure transgenerational succession are more likely to preserve socio-emotional wealth gains through making donations, increasing advertising/promotional expenditures, and voluntarily disclosing sustainability reports. On the other hand, they are less likely to engage in fraudulent or entertainment activities. Overall, these actions are understood to help offset *chaebol* firms' adverse ESG media exposure during the time of succession.

Lastly, to alleviate concerns about endogeneity between family succession and ESG reputational risk, we follow Benneden et al. (2007) and utilize the gender of the firstborn child as

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[11] In South Korea, the maximum inheritance tax rate is up to 80%, which consists of 50% of the inheritance tax rate and 30% of the business premium tax rate.

[12] Socio-emotional wealth (SEW) refers to the non-financial aspects of a business that family owners seek to preserve, encompassing their emotional attachment, identity, and influence within the firm, affecting their strategic decisions (Gómez-Mejía et al., 2007).

an instrumental variable to validate the impact of family succession on ESG reputational risk. Additionally, we check whether similar results emerge using alternative time periods by excluding the 2007-2008 financial crisis period. We also confirm that these results are consistent with alternative succession periods and RRI measures. Overall, the results highlight a significant and positive association between family succession events and ESG-related reputational risks.

Our study contributes to the existing literature in several ways. First, it focuses on the growing attention to the determinants of ESG exposure (Gillan et al., 2021). Current literature shows that legal origin (Cai et al., 2016; Liang & Renneboog, 2017), industry components (Borghesi et al., 2014), within-country variation in market characteristics (Di Giuli and Kostovetsky, 2014; Jha and Cox, 2015), variations in CEO and board characteristics such as age, compensation, confidence level, monitoring level, and gender diversity (Borghesi et al., 2014; Cronqvist and Yu, 2017; Hegde & Mishra, 2019; McCarthy et al., 2017; McGuinness et al., 2017; Zhang & Wong, 2022) and ownership structure such as institutional ownership (Fernando et al., 2017; Chen et al., 2020; Hwang et al., 2022; Li et al., 2021) or family firms (Abeysekera & Fernando, 2020; El Ghoul et al., 2016) significantly impact firms' ESG practices and ratings. In particular, recent studies focus on corporate social responsibility (CSR) to explore the influence of family ownership on firm's ESG practices (Campopiano & De Massis, 2015; Marques, Presas & Simon, 2014). While much of prior work focuses on internal CSR initiatives within firms, our study distinguishes itself by highlighting the role of ESG reputational risk, which is significantly influenced by media coverage. This aspect is vital for determining a firm's reputation and sustainability. Our study extends and complements prior studies by providing a more comprehensive understanding of how family ownership interacts with reputational dynamics, extending beyond the scope of internal CSR practices.

Second, our study elaborates on the socio-emotional wealth (SEW) perspective by suggesting that when family firms undergo transgenerational succession, followed by substantial media coverage, they subsequently seek for the preservation of socio-emotional wealth. This could be seen as a strategic approach to manage their reputation and social capital (Khoo et al., 2022; Benlemlih et al.,2023). It is widely recognized that family firms prioritize socio-emotional wealth preservation, placing long-term value on building their social legitimacy in the business community. For example, CSR (Yu et al., 2015), environmental protection (Berrone et al., 2010), and the adoption of sustainable certification (Delmas & Gergaud, 2014) are among the activities that align with the principles of social-emotional wealth management. In contrast, recent studies provide new insights indicating that family firms might prioritize socio-emotional wealth as a strategy to achieve short-term economic gains by safeguarding their reputational capital (Dou et al., 2014; Li et al., 2022). Our study extends these later studies by providing a specific case of the short-term socio-emotional wealth gain pursued by Korean *chaebol* firms in the context of trans-generational succession.

Third, our study enriches the literature on Korean *chaebol* in terms of their ownership structure and succession dynamics. The pyramidal ownership structure may lead to an agency problem because controlling *chaebol* families have excessive control over the cash flow rights of group affiliates. Thus, the tunneling view argues that *chaebol* families have strong incentives to benefit themselves by siphoning resources and expropriating minority shareholders (Bae et al., 2002; Baek et al., 2006; Joh, 2003). Recent Korean *chaebol* literature focuses on succession conflicts within family firms (such as sibling rivalry) (Lee et al., 2023; Gam et al., 2020) and the alternative transfer of control to heirs (tax avoidance) through related-party transactions (Cho et al., 2023; Hwang & Kim, 2015) or intragroup mergers (Shin 2020). Our research contributes to

the literature by focusing on how *chaebol* succession events relate to the likelihood of ESG reputational risk.

The remainder of this paper is organized as follows. Section 2 develops testable hypotheses. Section 3 describes the data and the methodology used. Section 4 discusses the main results and robustness test. Section 5 provides concluding remarks.

2. Hypotheses Development

Below, we hypothesize how family succession events affect ESG reputational risk in a *chaebol* firm and how controlling *chaebol* families respond to such heightened ESG reputational risk during the succession period.

Chaebol successions have received substantial negative attention from the media in two ways: sibling rivalries and pursuit of alternative transfer of control (inheritance tax avoidance). Sibling rivalry (Lee et al., 2023; Gam et al., 2020) is common in South Korea because *chaebols'* pyramidal structures provide strong incentives for risk-taking. By acquiring small ownership stakes in strategic firms, heirs can control the entire business group, leading to a 'winner takes all' scenario. However, excessive risk-taking often leads to decreased operating efficiency and reduction in firms' market value in the short run.

Additionally, under South Korea's regulatory environment, which imposes heavy inheritance taxes and prohibits the use of dual-class shares, *chaebols* transfer their control to heirs through alternative methods such as related-party transactions (Cho et al., 2023; Hwang & Kim, 2015) or intragroup mergers (Shin 2020) to evade inheritance taxes, resulting in negative market consequences.

Accordingly, minority shareholders suffer losses, while *chaebol* families reap benefits (Bae et al., 2002; Baek et al., 2006; Joh, 2003). Such negative media coverage of *chaebols'* succession conflicts directly induces firms' ESG-related reputational risks, triggering subsequent adverse reactions by stakeholders (Gantchev et al., 2022; Krueger et al., 2020; Houston & Shan, 2022).[13] In response to these pressures, *chaebol* firms become acutely motivated to achieve short-term objectives, particularly through reputation management, with family succession planning taking precedence as a key strategic goal. In this context, preserving socio-emotional wealth (SEW) emerges as a crucial strategy for securing short-term economic benefits by protecting their reputational capital.

SEW theory is vital for understanding the strategic behaviors of family firms, especially when facing reputational challenges during succession. SEW encompasses the non-financial values family firms prioritize, such as maintaining family control, upholding the family identity, and preserving emotional attachment to the firm (Gómez-Mejía et al., 2007; Berrone et al., 2010). During periods of heightened scrutiny, such as succession transitions, *chaebol* firms strategically leverage SEW preservation to protect their reputational capital, which, in turn, helps secure short-term economic benefits. For instance, engaging in socially responsible activities, aligning with environmental goals, and prioritizing sustainable certifications are approaches that bolster SEW while managing stakeholder perceptions (Deephouse & Jaskiewicz, 2013; Debicki et al., 2016; Delmas & Gergaud, 2014).

Recent literature further expands on the relationship between SEW and reputational management, noting that family firms' desire to protect SEW can drive them to engage in proactive

[13] Gantchev, Gianneti, and Li (2021) argue that customers boycott the firms' products. Krueger, Sautner, and Starks (2020) show that institutional investors disinvest in the firm's equity stocks. Houstan and Shan (2019) document that lenders terminate their lending relationship with the borrower firm.

ESG practices to avoid public scrutiny and safeguard their legacy (Deephouse & Jaskiewicz, 2013; Debicki et al., 2016; Gómez-Mejía et al., 2007). For *chaebol* firms, preserving SEW from a short-term perspective serves not only as a defensive mechanism but also as an opportunity to proactively engage with stakeholders and minimize negative externalities associated with succession conflicts. Evidence suggests that such firms are more likely to adopt socially responsible activities (Dou et al., 2014) and less likely to engage in fraudulent behavior, which could further tarnish their reputation (Liu et al., 2017). Accordingly, we build on the SEW framework to hypothesize that *chaebol* firms undergoing succession are motivated to adopt reputation management practices as a strategic response to mitigate ESG reputational risks and preserve their socio-emotional wealth. We establish H1 and H2 as follows:

H1. *The chaebol firms that undergo succession period are positively related to the ESG reputational risk.*

H2. *The chaebol firms seeking to ensure trans-generational succession are more likely to preserve socio-emotional wealth.*

3. Data and Methodology

3.1.Data

This section describes the data sources used in the empirical analysis. Our sample consists of non-financial firms listed on the Korea Composite Stock Price Index (KOSPI) or the Korea Securities Dealers Automated Quotations (KOSDAQ) from 2007 to 2015.[14] For the empirical tests, we rely on several data sources.

[14] Originally, RepRisk started screening ESG issues in 2007 (http://www.reprisk.com) and made the initial dataset available to researchers for ESG-related projects (temporarily) in 2016. Consequently, our RepRisk data spans from January 2007 to July 2015.

First, we measure a firm's ESG reputational risk using the media coverage of ESG-related incidents provided by the RepRisk database.[15] RepRisk tracks the number of environmental, social, and governance news events for over 120,000 public and private firms worldwide as of 2015. To measure and quantify firms' reputational risk exposure associated with ESG issues, RepRisk monitors 28 ESG-related news reports in the media[16] as well as other additional sources (e.g., NGOs, government bodies, newsletters, social media such as Twitter and blogs, and other online sources in 15 languages) on a daily basis. This database is based on non-subjective external media sources and is often used in current studies on ESG reputational risk (Choi et al.,2023; Li and Wu, 2020; Asante-Appiah, 2020; Burke et al., 2019; Kölbel et al., 2017).[17] RepRisk does not cover positive ESG practices, which are reported less often in traditional media, because positive or profit-oriented news is more likely to be self-reported (Economidou et al., 2023).

Our primary proxy for the firm's overall ESG reputational risk exposure is *RepRisk*, defined as the highest level of the RepRisk score over the last two years (*RRI* in the RepRisk database). We use the maximum score rather than relying on the mean value of the monthly ESG

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[15] RepRisk is a company that uses artificial intelligence to track stakeholder-related ESG issues covered in various media sources.

[16] RepRisk monitors 28 ESG-related issues reported in media. These issues consist of 6 environmental issues (Impact on ecosystems/landscapes, Global pollution, Local pollution, Overuse and wasting of resources, Waste issues, and Animal mistreatment); 10 social issues (Impact on communities, Human rights abuses and corporate complicity, Local participation issues, Social discrimination, Child labor, Forced labor, Occupational health and safety issues, Poor employment conditions, Freedom of association and collective bargaining, and Discrimination in employment); 7 governance issues (Corruption, bribery extortion and money laundering, Fraud, Tax evasion, Tax optimization, Anti-competitive practices, Executive compensation, and Misleading communication); and 5 supplementary issues (Products and services, Controversial products and services, Supply chain, Violation of international standards, and Violation of national legislation).

[17] The RepRisk data is different from traditional measures of ESG/CSR performance from the Thomson Reuters ESG scores or KLD (MSCI) data and is more suitable for our study. For example, traditional measures are based on the firm's self-reported information, which is internally created and may be overestimated at the manager's discretion. On the contrary, ESG data provided by RepRisk is based on significant external ESG-related media coverage evaluated by various stakeholders, offering a more objective assessment of the firm's ESG-related reputational risk. In addition to the mentioned benefits, RepRisk data may also alleviate concerns about endogeneity, as it is difficult for managers to endogenously manipulate negative news across various sources of media channels.

risk score because *chaebol* firms are likely to react more to the highest risk, which can severely harm their reputation, rather than the average risk they are exposed to in their normal business environment. In addition, we are concerned about the fact that annual values in the negative ESG score may not be equally translated into the frequencies of ESG risk incidents over the past two years. RepRisk explains that their annualized score is conditioned on previous incidents over a maximum period of two years and recommends that when analyzing a cumulative negative reputation score or the long-term ESG incident history of the firm, the maximum value of the score over the past 24 months should be the main metric used for the firm's overall ESG and business risk. As the succession events are planned and initiated in the relatively long-term timeline, we mainly rely on the long-term RepRisk index accumulated over the past two years.[18,19] RepRisk scores range from 0 to 100, where a higher score indicates a company's greater risk exposure to ESG aspects. An RRI score of 0 indicates that RepRisk has captured no ESG-related risk incidents for the company, or the RRI score was previously above 0, but it has decayed to 0 within a maximum period of 2 years.

Next, we construct *chaebol*-related data, such as succession, cash-flow rights, management disputes, and related party transactions. The full sample consists of 2,245 *chaebol* and non-*chaebol* firms from 48 large Korean business groups designated by the Korean Fair Trade Commission

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[18] *RepRisk* further explains that current annual values vary depending on the previous incidents. When a new risk incident occurs, the scores for firms with little or no prior ESG incident exposure change more significantly than those for firms with frequent prior exposure. As such, considering the maximum value of the index over the past 24 months helps us partly avoid the concern by acknowledging the most significant incident among others. Nevertheless, using the maximum score over the past 24 months may disproportionately highlight rare but highly visible events, potentially skewing the analysis toward extreme values and misrepresenting the firm's overall ESG risk profile. In an unreported table, we winsorize the index at the 1% and 5% levels, and our findings remain consistent. Further, as an additional robustness check, we switch to the annual RepRisk score (*Reprisk_ann*) in Model 2 in an unreported table and confirm that our results remain unchanged (Coefficient: 8.225, t-stat: 2.52).

[19] Succession planning can span several years, making an extended timeframe more suitable for capturing exposure to ESG incidents. In an unreported table, we examine the maximum value of the index over 36, 48, and 60 months. Although the sample size decreases as we extend the measurement period, our findings remain consistent, confirming the robustness of our results.

(KFTC) from 2007 to 2015. Among the 48 business groups, firms belonging to the first 41 business groups are controlled by the founding families (*chaebol*), whereas controlling shareholders of the remaining sample firms are not families but corporate entities (non-*chaebols*). Among the 41 business groups, 8 business groups underwent intergenerational succession process during the sample period (hereafter "*chaebols* with succession"), whereas 33 business groups experienced no intergenerational succession over the same period (hereafter "*chaebols* without succession"). We built the succession data of *chaebols* by referencing a publication from the Institute for Participatory Society, titled "*The Chaebol of Korea: The Management Structure and Personal Network of Korean Chaebol"* (2005), which provides family tree snapshots of the 30 largest Korean *chaebol* families. In addition, we manually collect the latest succession and family information from Korean news articles. In our sample, *chaebol* succession is not limited to a transition from founder to next generation but is measured across all generational transitions. Appendix Table A.1. provides a list of the 48 business groups including *chaebols* and non-*chaebols* during the sample period.

Finally, we merge our sustainability report data[20] and corporate fraud data[21] with firm-level financial data from DataGuide (provided by FnGuide), a local data source comparable to the Center for Research in Security Prices (CRSP) and Compustat in the US. Our final sample covers 2,245 firm-year observations from 2007 to 2015.

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[20] We build the sustainability report data with reference to a publication by Korea Corporate Governance Service (KCGS). This publication accumulates various uploaded reports from different institutions such as KCGS, Korean Standards Association, Korea Productivity Center, The Korea Chamber of Commerce & Industry, and Korea Sustainability Investment Forum, and from the website of each company that publishes its own sustainability reports.

[21] We obtain internal transactions, collusion, and unfair trade cases from the Korean Fair Trade Commission decisions on law violations that are publicly available on the authority's web page. Data regarding embezzlement, breach of duty, tax evasion, accounting, and disclosure fraud were collected from the DART managed by Korea Supervisory Service.

[Insert Table 1 about here]

Panel A of Table 1 presents the summary statistics for the sample firms. The analysis is based on data compiled at the year-end during the sample period. In Panel A, *RepRisk* refers to the logarithm of the highest level of RepRisk Index over the last 24 months, plus one. There may be a potential concern that extreme values or outliers in the RepRisk scores that fall in the wide range (0 to 100) might affect the regression coefficients. Following prior studies, we take the logarithm of the maximum RepRisk score to reduce the concern (Asante-Appiah & Lambert, 2022; Hasan et al., 2022).[22]

The average *RepRisk* is 1.662, and the 90th percentile value of ESG risk exposure is 3.714.[23] *D_GOV* [*D_SOCIAL, D_ENV*] refers to an indicator that takes the value of one if a firm is exposed to reputational risk related to governance [social, environmental] issues and zero otherwise. The sample firms are exposed to reputational risk covered by governance, social, and environmental issues by 33.4%, 19.7%, and 10.6%, respectively. Among the sample firms, 42.1% are exposed to at least one of the three categories of reputational risk, and 49.6% of those were never covered by the media with such issues. Among our sample, 29.1% are *chaebol* firms and

[22] As a robustness check, we switch to the raw measure of *RepRisk* (i.e., exp(*RepRis*k)-1) in model 3 and confirm our results remain consistent (Coefficient: 12.961, t-stat: 2.78).

[23] These statistics are comparable to the distribution of RepRisk reported in prior studies with a mean value of 1.39 (75 percentile of 2.86) according to Asante-Appiah and Lambert (2022) and a mean value of 2.108 (75 percentile of 3.526) according to Hasan, Habib, and Zhao (2022)). However, we observe more zero values (indicating a low-risk category according to RepRisk), which differs somewhat from RepRisk's claim that most U.S. based multinational corporations fall within the medium risk range (1.431-1.701). Chen (2021) finds that numerous zero RepRisk scores are exhibited among the target firms which are often non-multinational corporations. We, therefore, interpret this discrepancy as being due to the composition of Korean firms, which are not comprised solely of multinational corporations. Likewise, RepRisk scores, in our study, are likely to decay to zero over time due to inconsistent international media attention. We further interpret the presence of zero values as indicative of minimal ESG media coverage, which reflects no ESG-related risk incidents. However, around succession events, it appeared that *chaebol* firms receive more frequent ESG media coverage. As a robustness check, we examine our main analysis using the Tobit model to address the censoring issue (i.e., measurement limits and absence of true outcomes) and confirm that our results remain the same (Eisenberg et al., 2015).

10.2% underwent succession. The mean leverage ratio is 0.472 and *ROA* is 0.8%. The average *Cash holding*, *Tobin's q*, *Sales growth*, and *Firm age* are 6.1%, 1.168, 8.2%, and 34.5 years, respectively.

Panel B in Table 1 reports the summary statistics of *chaebol* firms. The average *RepRisk* is 2.177, and the sample firms are exposed to reputational risk related to governance, social, and environmental issues by 44.6%, 36.6%, and 21.4%, respectively. Among the sample firms, 57.9% are exposed to at least one of the three categories of reputational risk, and 37.5% of those were never covered by media with ESG-related issues. Among the *chaebol* firms, 35.2% underwent a succession process during the sample period. The mean *Cash-flow right* and *Related party transactions* are 21.7% and 2.4%, respectively. In addition, on average, 59.1% of *chaebol* firms have experienced succession disputes in the past. During the sample period, 40.9% of *the chaebol* firms voluntarily issued sustainability reports, whereas 13.4% of those committed corporate fraud. The mean leverage ratio is 0.53, and the *ROA* is 2.1%. The average *Cash holding*, *Tobin's q*, *Sales growth*, *and Firm age* are 5.7%, 1.130, 9.4%, and 35.7 years, respectively. Appendix Table A.3. provides the definitions of the variables used in our study.

[Insert Table 2 about here]

Panel A of Table 2 presents a univariate comparison of the mean values of ESG reputational risk and corporate action measures for *chaebol* and non-*chaebol* firms. First, we divide our sample into two groups: *chaebol* and non-*chaebol*. Panel A shows that ESG reputational risk is greater for *chaebol* firms. Specifically, the average *RepRisk* for *chaebol* firms is 2.177, which is significantly higher than the 1.451 observed for non-*chaebol* firms. These results are consistent with alternative ESG reputational risk measures, including *D_GOV*, *D_SOCIAL*, *D_ENV, D_RRI, and D_Nevernews*. Furthermore, the univariate results show that *chaebol* firms exhibit

significantly higher levels of donations, advertisement expenses, and voluntary disclosure of sustainability reports than non-*chaebol* firms. They are also more inclined to commit corporate fraud but are less likely to incur entertainment expenses. These findings highlight the unique corporate characteristics of *chaebol* firms, setting them apart from non-*chaebol* firms. One may argue that another significant different characteristic between *chaebol* and non-*chaebol* firms drives the results in the main analysis rather than succession events. To mitigate such concerns, we solely focus on *chaebol firms* in Panel B.[24]

In Panel B, we rerun the same analysis by separating *chaebol* firms into two groups: *chaebol* with succession[25] and *chaebol* without succession. We find that *chaebol* firms that underwent a generation-to-generation succession process during our sample period show a significantly higher average *RepRisk* of 2.608, compared to 1.943 for *chaebol* firms that did not experience such a transition. Further tests using alternative measures of reputational risk exhibit similar patterns. We also confirm that *chaebol* firms that underwent succession processes are more likely to care for their reputation and social capital, as evidenced by significantly higher levels of donations, advertisement expenses, and voluntary disclosure of sustainability reports. Conversely, they are

[24] For the same reason, our main analysis in Panel B of Table 3 focuses solely on a sample of *chaebol* firms, as specified in equation (2). In addition, to address potential omitted variable bias at the business group level, we include industry fixed effects. Since Korean *chaebol* firms have grown specialized in specific industries under government initiatives since the centrally planned economic era of the 1960s, each *chaebol* group is now a heavily diversified conglomerate. Including a group dummy in addition to industry fixed effects does not explain additional within-group variation.

[25] Lee, Shin and Yun (2023) define entire sample period as the succession period and divide it into pre- and post-succession period. Following this paper, we identify a succession event if a *chaebol* undergoes a trans-generational succession process anytime during the sample period because negative media coverage about *chaebol* succession issues is highlighted in both pre- and post-succession periods in the long run. For example, one of the highest-profile succession battles in the Hyundai Group in the early 2000s (Wall Street Journal, April 3, 2000) lasted and was covered by the media over a decade (Wall Street Journal, November 11, 2010). To alleviate the concerns regarding succession period, we use an alternative 10-year succession window in Panel B of Table 7.

less likely to engage in fraudulent or entertainment activities. These results align with our hypothesis based on the socio-emotional wealth view.

3.2.Empirical design

We first test our baseline regression by employing the following OLS regression with full samples for firm *i* in business group *j* in year *t* using *RepRisk* as the dependent variable.

$$RepRisk_{i,j,t} = \beta_0 + \beta_1 Chaebol_{\ i,j,t} + \beta_2 Chaebol\ with\ succession_{i,j,t} + \gamma X_{i,j,t} + I_{SIC2} + \delta_t + \epsilon_{i,j,t} \quad (1)$$

The *Chaebol* indicator captures the difference in *RepRisk* between *chaebol* firms with succession and non-*chaebol* firms.[26] The *Chaebol with succession* indicator captures the difference in *RepRisk* between *chaebol* firms with succession and *chaebol* firms without succession.[27] Control variables $X_{i,j,t}$ includes *Size*, *Leverage*, *ROA*, *Cash holding*, *Tobin's q*, *Sales growth*, and *Firm age*. Similar to Almeida et al. (2011), we include the 2-digit Korean Standard Industrial Classification (KSIC) indicator I_{SIC2}[28], and year indicator δ_t. Standard errors are clustered at the firm-level. Our hypotheses imply that $\beta_1 > 0$ and $\beta_2 > 0$.

Next, we only focus on a subsample of *chaebol* firms to test our **H1**.

$$RepRisk_{i,j,t} = \beta_0 + \beta_1 Chaebol\ with\ succession_{i,j,t} + \gamma X_{i,j,t} + I_{SIC2} + \delta_t + \epsilon_{i,j,t} \quad (2)$$

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[26] From Equation (1), $RRI_{i,j,t}[Chaebol = 1, Chaebol\ with\ succession = 0] - RRI_{i,j,t}\ [Chaebol = 0, Chaebol\ with\ succession = 0] = \beta_1$

[27] From Equation (1), $RRI_{i,j,t}[Chaebol = 1, Chaebol\ with\ succession = 1] - RRI_{i,j,t}[Chaebol = 1, Chaebol\ with\ succession = 0] = \beta_2$

[28] In untabulated results, the highest levels of reputational risk are observed in the tobacco products manufacturing, air transport, and electricity, gas, steam, and air conditioning supply industries. This observation aligns with prior research identifying ESG-sensitive sectors—such as alcohol, gaming, gas, and oil—as particularly vulnerable to heightened reputational risks (Cho & Patten, 2007; Palazzo & Scherer, 2006; Brammer & Millington, 2005; Mitchell et al., 1997). To enhance the robustness of our analysis, we incorporate industry fixed effects to account for within-industry variation in reputational risk.

The *Chaebol with succession* indicator captures the difference in *RepRisk* between *chaebol* firms with succession and *chaebol* firms without succession[29]. All the other specifications are the same as those in Equation (1). We anticipate that $\beta_1 > 0$

Additionally, following Gam et al. (2021), we conduct a conditional test by running the following OLS regression: Based on Equation (2), we divide our *Chaebol with succession* into two categories as follows: (1) *High cash-flow right* vs. *Low cash-flow right*, (2) *Dispute* vs. *No dispute*, and (3) *High related party transactions* vs. *Low related party transactions*. We conduct this separation to isolate any common effects of *chaebol* succession and determine the characteristics that primarily drive our baseline results by comparing the magnitudes of the two different parts.

$$RRI_{i,j,t} = \beta_0 + \beta_1 Chaebol\ with\ succession_{i,j,t} \times D_{High} + \beta_2 Chaebol\ with\ succession_{i,j,t} \times D_{Low} + \gamma X_{i,j,t} + I_{SIC2} + \delta_t + \epsilon_{i,j,t} \quad (3)$$

where D_{High} represents a high dummy variable at the firm level, including *High cash-flow right*, *High related party transaction*, and *Dispute*. D_{Low} represents a low dummy variable at the firm level, including *Low cash-flow right*, *Low related party transaction*, and *No Dispute*. All other empirical specifications are the same as those in the regressions of Equations (1) and (2). We predict that $\beta_1 > \beta_2$.

Finally, we examine the corporate responses to ESG reputational risk to test our **H2**.

[29]From Equation (2), $RRI_{i,j,t}[Chaebol\ with\ succession = 1] - RRI_{i,j,t}[Chaebol\ with\ succession = 0] = \beta_1$

$$Corporate\ response_{i,j,t+1} = \beta_0 + \beta_1 Chaebol\ with\ succession_{i,j,t} + \gamma X_{i,j,t} + I_{SIC2} + \delta_t + \epsilon_{i,j,t} \quad (4)$$

We replicate the analysis based on Equation (2) by replacing the dependent variables. Corporate responses are measured by donation, advertisement expenses, voluntary disclosure of sustainability report, severe fraud, minor fraud such as correction, and entertainment expenses. The sign of β_1 can vary depending on the type of corporate response measured. During periods of succession, if *chaebol* families aim to mitigate ESG reputational risks by prioritizing socioemotional wealth (SEW) for a smooth generational transition, *chaebol* firms undergoing succession are likely to focus on their ESG commitments. To improve corporate image, *chaebol* families intentionally increase expenditures on donations and advertising or voluntarily release sustainability reports ($\beta_1 > 0$), while reducing the likelihood of involvement in fraudulent practices or entertainment-related activities ($\beta_1 < 0$).

4. Results and Discussion

4.1.Succession and ESG reputational risk in *chaebol* firms

Table 3 provides the results of the examination of the relationship between family succession and ESG reputational risk in *chaebol* firms (H1). Panel A of Table 3 provides the results of Equation (1), which tested H1. In Columns 1 and 2 of Panel A, the dependent variable is *RepRisk*, representing the logarithm of the highest level of the RepRisk Index for all types of ESG issues over the last 24 months. In Columns 3–5, the dependent variables are each type of ESG reputational risk: *D_GOV*, *D_SOCIAL*, *and D_ENV*, respectively. We also include Appendix Table A.2., which

presents the regression results with all control variables incorporated, replicating the primary findings from Table 3.

[Insert Table 3 about here]

In Column 1, we use the *Chaebol* indicator as our main explanatory variable, which captures the difference in the ESG reputational risk between *chaebol* firms and non-*chaebol* firms during the sample period. Column 1 shows a positive point estimate of 0.460 for *Chaebol*, which is significant at the 1% level. In terms of economic significance, this result indicates that *chaebol* firms, on average, exhibit 27.68% (27.68=0.460/1.662×100) higher ESG reputational risk compared to non-*chaebol* firms, considering that the average *RepRisk* is 1.662.

Next, we compare the ESG reputational risk between *chaebol* firms that underwent a succession process and those that did not during the sample period. In Column 2 of Panel A, we add '*Chaebol with succession'* to the existing *Chaebol* indicator as an explanatory variable. The '*Chaebol with succession'* indicator captures the difference in *RepRisk* between *chaebol* firms with succession and those without[30]. We find a positive point estimate of 0.617 for '*Chaebol with succession'*, which is significant at the 1% level. These results indicate that *chaebol* firms undergoing succession show a stronger positive correlation with ESG reputational risk compared to *chaebol* firms without a succession event.

Succession inherently brings change in leadership in the organization, which impacts not only on the firm's governance framework, but also on the social and environmental aspects of ESG (Cambrea et al., 2024; Huang and Chen, 2024). Particularly, succession, which transitions to a younger generation of leaders, is likely to bring not only governance reforms but also changes in

[30] From Equation (2), $RRI_{i,j,t}[Chaebol = 1, Chaebol\ with\ succession = 1] - RRI_{i,j,t}[Chaebol = 1, Chaebol\ with\ succession = 0] = \beta_2$

how corporations should address environmental and social issues (Wu, Zhu, and Zhang, 2023). However, depending on the characteristics of the incoming leadership (Cambrea et al., 2024) or on the family firm's distinct Socio-emotional wealth needs (Gu et al., 2019; Hsu and Chen, 2021), the company strategy toward all three dimensions of ESG may be impacted negatively (positively) with or after the succession, which may introduce heightened (lowered) level of reputational risks to the firm. We find that *chaebol* firms that have undergone succession show higher reputational risk in all three categories: environmental, social, and governance. Particularly, we replicate the analysis from Column 2 of Table 3 in Columns 3 to 5 of Panel A by replacing *RepRisk* with *D_GOV*, *D_SOCIAL*, *and D_ENV*, respectively. We find similar results with that in Column 2. These results indicate that the relationship between family succession and ESG reputational risk in *chaebol* firms remains consistent across the environmental (*D_ENV*), social (*D_SOCIAL*), and governance (*D_GOV*) aspects of ESG. These findings imply the comprehensive nature of the reputational risks associated with *chaebol* succession, showing that the succession event not only impacts on the governance practices but also on other categories of ESG, reaffirming the robustness of our results.

In Panel B, we focus solely on a subsample of *chaebol* firms. Panel B presents the results of Equation (2) to test H1. Column 1 shows a positive point estimate of 0.625 for '*Chaebol with succession'*, significant at the 5% level. Considering that the average *RepRisk* for *chaebol* sample is 2.177, the results indicate that *chaebol* firms that undergo a succession process, on an average, take 28.71% (28.71=0.625/2.177×100) higher ESG reputational risk than other *chaebol* firms, thereby demonstrating economic significance. Columns 2 to 4 of Panel B show similar patterns for each category of ESG reputational risk in *chaebol* firms. Overall, Table 3 suggests that family succession events, as measured by '*Chaebol with succession'*, predict ESG reputational risk.

4.2. Conditional Analysis

To further verify factors driving our baseline analysis, we conduct several conditional tests on the characteristics of *chaebol* succession. The estimates are based on the OLS regressions in Equation (3), with the dependent variables being *RepRisk*, *D_GOV*, *D_SOCIAL*, and *D_ENV* in Columns 1–4, respectively. In Table 4, we decompose the right-hand-side (RHS) variable '*Chaebol with succession'* into two parts in each panel using the following indicator variables: *High cash-flow right* versus *Low cash-flow right* in Panel A, *High related party transaction* versus *Low related party transaction* in Panel B, and *Dispute* versus *No dispute* in Panel C.

[Insert Table 4 about here]

4.2.1. Cash-flow right

Korean *chaebol* families control the entire business group by owning disproportionately small stakes in a handful of central firms (Almeida et al., 2011; Shin 2020). The next generation's heirs gain control of the business by owning those strategically important firms. Thus, we anticipate that succession issues are more likely to arise in key firms where controlling shareholders' direct ownership is heavily concentrated.

In Column 1, the dependent variable is *RepRisk*. The point estimate of *Chaebol with succession* × *High cash-flow right* is positive (3.415) and statistically significant at the 1% level, while the point estimate (4.064) of *Chaebol with succession* × *Low cash-flow right* is statistically insignificant. In Column 2, the dependent variable is *D_GOV*. The point estimate of *Chaebol with succession* × *High cash-flow right* is positive (1.078) and statistically significant at the 5% level, whereas the point estimate (0.284) of *Chaebol with succession* × *Low cash-flow right* is statistically insignificant. In Column 3, the dependent variable is *D_SOCIAL*. The point estimate of *Chaebol with succession* × *High cash-flow right* is positive (1.004) and statistically significant at the 5%

level, while the point estimate (1.905) of *Chaebol with succession* × *Low cash-flow right* is statistically insignificant. The results in Column 4 indicate that controlling the family's ultimate cashflow right is irrelevant to ESG reputational risk related to environmental issues. The estimates of *Chaebol with succession* × *High cash-flow right* and *Chaebol with succession* × *Low cash-flow right* are positive (0.973 and 1.242, respectively) and statistically insignificant.

These results validate our prediction that ESG reputational risk is more likely in key strategic firms where controlling families' direct ownership is heavily concentrated. Our study also indicates that family succession via transferring ownership to the next generation is relevant to ESG risks associated with the governance and social issues.

4.2.2. Dispute over management

During a *chaebol* succession, only the winner of the sibling rivalry inherits the controlling stakes in those strategically important firms through which the entire business group is controlled. Sibling rivalry mainly involves direct bloodline sons, and the oldest son is typically preferred for succession. Accordingly, younger sons inherit fewer shares in peripheral firms, incentivizing them to engage in a succession battle because only the selected heirs would essentially exercise control over the entire family business (Lee et al., 2023; Gam et al., 2020). Thus, we anticipate that more succession issues would be disclosed to the public in firms with sibling disputes over management.

In Column 1, the dependent variable is *RepRisk*. The point estimate of *Chaebol with succession* × *Dispute* is positive (0.775) and statistically significant at the 1% level, whereas the point estimate (0.286) of *Chaebol with succession* × *No dispute* is statistically insignificant. In Column 2, the dependent variable is *D_GOV*. The point estimate of *Chaebol with succession* × *Dispute* is positive (0.208) and statistically significant at the 5% level, while the point estimate

(0.025) of *Chaebol with succession × No dispute* is statistically insignificant. In Column 3, the dependent variable is *D_SOCIAL*. The point estimate of *Chaebol with succession × Dispute* is positive (0.253) and statistically significant at the 5% level, whereas the point estimate (0.090) of *Chaebol with succession ×No dispute* is statistically insignificant. In Column 4, the dependent variable is *D_ENV*. The point estimate of *Chaebol with succession ×Dispute* is positive (0.247) and statistically significant at the 5% level, while the point estimate (0.098) of *Chaebol with succession × No dispute* is statistically insignificant.

Overall, consistent results across categories suggest that the positive association between family succession and ESG reputational risk is stronger in firms with disputes among family members.

4.2.3. Related party transaction

Under South Korea's regulatory circumstances, where a heavy inheritance tax rate is imposed and dual-class shares are absent, the controlling shareholders of *chaebol* business groups transfer control through alternative methods such as related-party transactions[31] (Cho et al., 2023; Hwang & Kim, 2016). We predict that the effect of *Chaebol with succession* would be stronger in firms funded by related party transactions.

In Column 1, the dependent variable is *RepRisk*. The point estimate of *Chaebol with succession × High related party transaction* is positive (1.249) and statistically significant at the 1% level, while the negative point estimate (-0.479) of *Chaebol with succession × Low related party transaction* is statistically insignificant. In Column 2, the dependent variable is *D_GOV*. The

[31]Hwang and Kim (2016) explain that a family that controls a business group uses related-party transactions to benefit companies in which its heirs hold a significant stake, thereby allowing those companies to become large enough to strengthen their control over other companies in the group.

point estimate of *Chaebol with succession* × *High related party transaction* is positive (0.516) and statistically significant at the 1% level, while the point estimate (-0.395) of *Chaebol with succession* × *Low related party transaction* is statistically insignificant. Columns 3 and 4 show insignificant results for both *D_SOCIAL* and *D_ENV.*

Consistent with our expectations, we find that positive correlations between family succession events and ESG reputational risk are more significant for family firms that benefit from related party transactions. Altogether, the results listed in Panels A to C of Table 4 highlight that family succession is a key driver of ESG reputational risk in *chaebol* firms.

4.3. Corporate responses to ESG reputational risk

Next, we provide evidence by examining the consequences of high ESG reputational risk during the succession process. We anticipate that *chaebol* firms seeking to ensure transgenerational succession are more likely to preserve their socio-emotional wealth (**H2**). Thus, family firms that undergo the succession process are expected to avoid morally hazardous problems, with controlling families caring more about their own reputation and social capital. To enhance their corporate image, *chaebol* families are expected to increase donation/advertisement expenses or voluntarily disclose sustainability reports[32]. At the same time, they are less likely to engage in fraudulent or entertainment activities.

In Table 5, to test *chaebol*'s response to high ESG reputational risk during the succession period, we replicate the same analysis we conducted in Panel B of Table 3 based on Equation (2) by replacing the dependent variables. In Columns 1 to 6, the dependent variables are

[32]Issuing sustainability reports is not mandatory in South Korea during our sample period. Thus, voluntary commitments to release sustainability reports are regarded as a socially desirable way that links to the SEW view.

D_Donation(t+1), *D_Advertisement(t+1)*, *D_Sustainability(t+1)*, *D_Fraud(t+1)*, *D_Correction(t+1)*, *D_Entertainment(t+1)*, respectively.

[Insert Table 5 about here]

In Column 1, the point estimate of *D_Donation(t+1)* is positive (0.141) and statistically significant at the 10% level. In Column 2, the point estimate of *D_Advertisement (t+1)* is positive (0.249) and statistically significant at the 5% level. In Column 3, the point estimate of *D_Sustainabilty (t+1)* is positive (0.228) and statistically significant at the 5% level. The results in Columns 1 to 3 suggest that in *chaebol* firms undergoing succession events, donations (23.9%), advertisement expenses (44.7%), and voluntary disclosure of sustainability reports (55.7%) are, on average, higher than those in *chaebol* firms without succession.

In Column 4, the point estimate of *D_Fraud(t+1)* is negative (-0.084) and statistically significant at the 5% level. Considering that the mean of *D_Fraud* is 0.134, the results indicate that *chaebol* firms undergoing succession have, on average, 62.69% (62.69=0.084/0.134×100) fewer fraud cases than *chaebol* firms that did not undergo succession during the sample period. In Column 5, the positive (0.008) point estimate of *D_Correction(t+1)* is not statistically significant. The KFTC categorizes corporate fraud into three types based on ex-post settlement outcomes: correction orders, fine impositions, and prosecutions. Given that correction orders represent minor offenses, this type of fraud is more likely to be unintentional rather than deliberate. Thus, the insignificant result of *D_Correction(t+1)* suggests that the dramatic decrease in fraud is intentionally driven by controlling shareholders. In Column 6, we find that the point estimate of *D_Entertainemnt (t+1)* is negative (-0.342) and statistically significant at the 1% level.

The results in Table 5 are consistent with our predictions. These findings imply that during the succession period, *chaebol* families mitigate ESG reputational risk by pursuing SEW gains for

a smooth transition of control to the next generation. Thus, *chaebol* firms that undergo succession are encouraged to pay particular attention to their ESG commitments.

4.4. Instrument variable analysis

We understand that there is an endogeneity possibility due to simultaneity. For example, succession decisions and ESG reputational risk may be jointly determined by unknown factors, like investment opportunities, which might negatively affect ESG reputational risk. To address this issue, following Bennedsen et al. (2007), we use the gender of the first-born child as an instrumental variable to isolate the relationship between corporate decisions related to *chaebol* succession and ESG reputational risk.[33] The gender of the first child is determined by nature, and Korean *chaebols* only transfer control to male heirs rather than female heirs. Therefore, the gap in succession by gender is expected to be significant. Thus, the selected instrumental variable helps to alleviate concerns about endogeneity in *chaebol*'s decisions related to succession events.[34]

[Insert Table 6about here]

In Table 6, Column 1 reports the first-stage results, while Columns 2 to 4 present the 2SLS results, where *Chaebol with succession* is instrumented by *First son*, an indicator variable equal to one if the gender of the first-born child is male in a *chaebol* group, and zero otherwise. Similar to the baseline analysis from Panel B of Table 3, Table 6 presents a positive relationship between *Chaebol with succession* and *ESG reputational risk*. In Column 2, the point estimate (1.176) is

[33] Similar to the findings in the small, private firm samples of Bennedson et al. (2007), the succession process of large *chaebol* conglomerates has strong preference on senior male heirs from direct bloodlines of the founding *chaebol* family. This preference is deeply rooted in Korean culture, influenced by traditional Confucianism. These cultural factors suggest that the first-born son in a *chaebol* family have a substantial impact on the overall family succession planning.

[34] Column 1 of Table 6 shows that the F-statistic of the first stage is 14.42, suggesting that our instrument variable, the gender of the firstborn child, is unlikely to be a weak instrument.

almost twice as high as the baseline estimate (0.625) in Column 1 of Panel B of Table 3, after disentangling the unknown negative effects from the effect of *chaebol* succession. Consequently, this implies that the results of the baseline regressions are underestimated. In Columns 3 to 5, tests for each category of ESG reputational risk—*D_GOV, D_SOCIAL,* and *D_ENV*—consistently show positive results (0.250, 0.422, and 0.460, respectively), all significant at the 1% or 5% level. Overall, the instrumental variable analysis indicates that family succession positively influences ESG reputational risk in *chaebol* firms.

4.5.Robustness tests

Table 7 presents the results of the general robustness checks of our main findings reported in Tables 3 and 4. One of the primary concerns is the potential influence of the 2007-2008 global financial crisis, which falls within our sample period. One may argue that this confounding factor may have increased the ESG reputational risk of *chaebol* firms. To address this concern, we rerun the baseline analyses from the first columns of Panel B of Tables 3 and 4, excluding the global financial crisis period from 2007 to 2008. The results are reported in Panel A of Table 7. As shown in Panel A, the results remain robust to the potential confounding effect, suggesting that the ESG reputational risk in *chaebol* firms is not primarily driven by macroeconomic events such as the global financial crisis.

[Insert Table 7 about here]

Other important concerns are the issues of the succession period and the measures of ESG reputational risks. To address these concerns, we use an alternative 10-year succession window to replace the succession period for the entire sample year of the *chaebol* with succession issues in

Panel B of Table 7. We confirm that these results are consistent with the findings from the previous tables.

In Panel C, we replace the dependent variable *RepRisk* with alternative RRI measures: *D_RRI* and *D_Nevernews*. *D_RRI* is an indicator that has a value of one if a firm is exposed to reputational risk related to ESG issues, and zero otherwise. *D_Nevernews* is an indicator that takes a value of one if a firm is never exposed to reputational risk related to ESG issues across all sample years, and zero otherwise. Consistent with our expectations, we find similar results with baseline analyses for *D_RRI* but observe a negative relation between *Chaebol with succession* and *D_Nevernews.*

Overall, our results remain consistent and robust to alternative measures of the sample period, succession period, and ESG reputational risk.

5. Conclusion

One of the main features that distinguishes family firms from non-family firms is the succession to the next generation. This study identifies family succession as a key driver of ESG reputational risk in Korean *chaebol* firms. Our findings show a clear pattern of significantly heightened ESG reputational risk in *chaebol* firms undergoing business succession, compared to those without succession issues or to non-*chaebol* firms. This pattern is particularly pronounced in firms experiencing intense succession conflicts. Additionally, we find that *chaebol* firms with these succession conflicts face heightened reputational risks across all three dimensions of ESG – environmental, social, and governance. This may imply that stakeholders lose confidence in the *chaebols*' ability to manage ESG-related matters effectively when *chaebols* are in succession conflicts.

To further verify the causal relationship between family succession and ESG reputational risk, we employ a two-stage least square regression, using the gender of the first-born child as an instrumental variable. In addition, robustness tests using various measures for the dependent and independent variables and an alternative sample period, validate the key findings. Such high ESG reputational risk in *chaebol* firms, triggered by succession conflicts, is likely to elicit adverse reactions from stakeholders concerning the *chaebol* family's succession planning. To mitigate such adverse reactions, *chaebol* firms proactively partake in socially responsible activities, while distancing themselves from any involvement in corporate misconduct. These results suggest that *chaebol* firms seeking smooth trans-generational succession are willing to preserve their socio-emotional wealth gains in the short term.

It is crucial to note that our analysis is grounded in the Korean context, where the maximum inheritance tax rate is the second highest among OECD countries, and dual-class ownership is unavailable. As such, one should recognize that family succession should not be exclusively viewed as the main driver of ESG reputation risk. It is important to understand how family succession interacts with ESG reputational risk within varying institutional contexts. In this regard, we aim to initiate a meaningful corporate policy discussion on taxation and governance, which warrants future studies.

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Table 1. Summary Statistics

Panel A of Table 1 reports summary statistics for our sample, consisting of 2,245 firm-year observations listed on KOSPI or KOSDAQ from 2007 to 2015. Panel B reports summary statistics for 653 *chaebol* firms from 41 large business groups designated by the Korean Fair Trade Commission (KFTC). The values are measured at the end of each fiscal year. Appendix Table A.1 provides the list of *chaebol* groups and Appendix Table A.3 shows a description of each variable.

Panel A. Full sample	N	Mean	Std. Dev	10th percentile	Median	90th percentile
Reputational risk						
RepRisk	2245	1.662	1.744	0.000	0.000	3.714
D_GOV	2245	0.334	0.472	0	0	1
D_SOCIAL	2245	0.197	0.398	0	0	1
D_ENV	2245	0.106	0.308	0	0	1
D_RRI	2245	0.421	0.494	0	0	1
D_nevernews	2245	0.496	0.500	0	0	1
Chaebol variables						
Chaebol	2245	0.291	0.454	0	0	1
Chaebol with succession	2245	0.102	0.303	0	0	1
Control variables						
Size	2245	3.346	11.446	0.079	0.494	6.524
Leverage	2245	0.472	0.213	0.175	0.490	0.742
ROA	2245	0.008	0.120	-0.082	0.025	0.097
Cash holding	2245	0.061	0.064	0.005	0.041	0.143
Tobin's q	2245	1.168	0.630	0.687	0.988	1.877
Sales growth	2245	0.082	0.381	-0.205	0.047	0.347
Firm age	2245	34.475	18.354	10	35	57

(Continued)

Panel B. *Chaebol* sample	N	MEAN	SD	10th percentile	Median	90th percentile
Reputational risk						
RepRisk	653	2.177	1.740	0.000	3.258	3.784
D_GOV	653	0.446	0.497	0	0	1
D_SOCIAL	653	0.366	0.482	0	0	1
D_ENV	653	0.214	0.411	0	0	1
D_RRI	653	0.579	0.494	0	0	1
D_Nevernews	653	0.375	0.485	0	0	1
Chaebol variables						
Chaebol with succession	653	0.352	0.478	0	0	1
Cash-flow right	653	0.217	0.172	0.030	0.172	0.489
Related party transaction	653	0.024	0.187	-0.128	0.000	0.146
Dispute	653	0.591	0.492	0	1	1
Corporate action variables						
D_Donation	534	0.590	0.492	0	1	1
D_Advertisement	549	0.557	0.497	0	1	1
D_Sustainability	653	0.409	0.492	0	0	1
D_Fraud	584	0.134	0.340	0	0	1
D_Correction	584	0.026	0.158	0	0	0
D_Entertainment	378	0.317	0.466	0	0	1
Control variables						
Size	653	7.206	16.278	0.503	2.326	17.593
Leverage	653	0.530	0.209	0.235	0.555	0.793
ROA	653	0.021	0.072	-0.058	0.025	0.091
Cash holding	653	0.057	0.055	0.006	0.039	0.129
Tobin's q	653	1.130	0.487	0.748	1.013	1.577
Sales growth	653	0.094	0.358	-0.163	0.052	0.362
Firm age	653	35.729	19.099	9	38	61

Table 2. Univariate Analysis

Panel A presents the results of the univariate test of the mean values of the main variables between *chaebol* and non-*chaebol* firms in regard to significant differences. In Panel B, we rerun the same analysis by separating *chaebol* firms into two groups, *chaebol* with succession and *chaebol* without succession. Appendix Table A.3 provides a description of each variable. ***, **, * indicate significance at 1%, 5%, and 10% level, respectively.

Panel A. *Chaebol* vs. Non-*chaebol*

	Chaebol (N=653)	Non-*chaebol* (N=1592)	Difference		P-value
RepRisk	2.177	1.451	0.726	***	0.00
D_GOV	0.446	0.288	0.158	***	0.00
D_SOCIAL	0.366	0.128	0.238	***	0.00
D_ENV	0.214	0.062	0.153	***	0.00
D_RRI	0.579	0.357	0.222	***	0.00
D_Nevernews	0.375	0.545	-0.170	***	0.00
D_Donation	0.590	0.467	0.123	***	0.00
D_Advertisement	0.557	0.487	0.070	**	0.01
D_Sustainability	0.409	0.061	0.348	***	0.00
D_Fraud	0.134	0.068	0.066	***	0.00
D_Correction	0.026	0.002	0.024	***	0.00
D_Entertainment	0.318	0.562	-0.245	***	0.00

Panel B. *Chaebol* with succession vs. *Chaebol* without succession

	Chaebol with succession (N=230)	*Chaebol* without succession (N=423)	Difference		P-value
RepRisk	2.608	1.943	0.665	***	0.00
D_GOV	0.565	0.381	0.185	***	0.00
D_SOCIAL	0.517	0.284	0.234	***	0.00
D_ENV	0.365	0.132	0.233	***	0.00
D_RRI	0.687	0.520	0.167	***	0.00
D_Nevernews	0.274	0.430	-0.156	***	0.00
D_Donation	0.747	0.506	0.242	***	0.00
D_Advertisement	0.833	0.403	0.429	**	0.01
D_Sustainability	0.583	0.314	0.268	***	0.00
D_Fraud	0.091	0.158	-0.067	***	0.00
D_Correction	0.024	0.027	-0.003	***	0.00
D_Entertainment	0.106	0.379	-0.273	***	0.00

Table 3. Succession and ESG Reputational Risk in *Chaebol* Firms

In Panel A, the sample consists of 2,245 firm-year observations listed on KOSPI or KOSDAQ from 2007 to 2015. In Panel B, the sample consists of 653 *chaebol* firms from 41 large business groups designated by the Korean Fair Trade Commission (KFTC). Each column reports the coefficients from an OLS regression with heteroscedasticity-robust standard errors. t-values are reported in the parenthesis under the coefficient estimates. In Column 1 and 2 of Panel A (Column 1 of Panel B), the dependent variable is *RepRisk*, which refers to the logarithm of highest level of RepRisk Index related to ESG issues over the last 24 months. In Column 3 to 5 of Panel A (Column 2 to 4 of Panel B), the dependent variable is *D_GOV* [*D_SOCIAL*, *D_ENV*], which refers to the indicator that has a value of one if a firm is exposed to reputational risk related to a governance [social, environmental] issue, and zero otherwise. *Chaebol* refers to an indicator that has a value of one if a firm belongs to a *chaebol* group whose controlling shareholders are founding family, and zero otherwise. *Chaebol with succession* refers to an indicator that has a value of one if a firm belongs to a *chaebol* business group that undergo trans-generational succession process during the sample period, and zero otherwise. Control variables include *Size*, *Leverage*, *ROA*, *Cash holding*, *Tobin's q*, *Sales growth*, and *Firm age*. Industry, year indicators, and a constant are included in all specifications. The standard errors clustered at the firm level. ***, **, * indicate significance at 1%, 5%, and 10% level, respectively.

Panel A: Full sample	Dependent variables				
	(1)	(2)	(3)	(4)	(5)
	RepRisk	RepRisk	D_GOV	D_SOCIAL	D_ENV
Chaebol with succession		0.617***	0.140**	0.164**	0.176**
		(2.87)	(2.30)	(2.12)	(2.38)
Chaebol	0.460***	0.274**	0.038	0.085*	0.040
	(3.80)	(2.11)	(0.99)	(1.93)	(1.28)
Control variables	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES
Observations	2,245	2,245	2,245	2,245	2,245
R-squared	0.434	0.440	0.338	0.341	0.357

Panel B: *Chaebol* sample	Dependent variables			
	(1)	(2)	(3)	(4)
	RepRisk	D_GOV	D_SOCIAL	D_ENV
Chaebol with succession	0.625**	0.152**	0.203**	0.201**
	(2.47)	(2.25)	(2.16)	(2.37)
Control variables	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	653	653	653	653
R-squared	0.504	0.420	0.381	0.395

Table 4. *Chaebol* Succession: Cash-flow right, Related Party Transaction, and Dispute

The sample consists of 653 *chaebol* firms from 41 large business groups designated by the Korean Fair Trade Commission (KFTC). Each column reports the coefficients from an OLS regression with heteroscedasticity-robust standard errors. t-values are reported in the parenthesis under the coefficient estimates. In Column 1, the dependent variable is *RepRisk*, which refers to the logarithm of highest level of RepRisk Index related to ESG issues over the last 24 months. In Column 2 to 4, the dependent variable is *D_GOV* [*D_SOCIAL, D_ENV*], which refers to the indicator that has a value of one if a firm is exposed to reputational risk related to a governance [social, environmental] issue, and zero otherwise. *Chaebol with succession* refers to an indicator that has a value of one if a firm belongs to a *chaebol* business group that undergo trans-generational succession process during the sample period, and zero otherwise. In Panal A, *High cash-flow right* refers to an indicator that has value of one if firm's ultimate cash-flow right is higher than median of sample firms, and zero otherwise. *Low cash-flow right* refers to an indicator that has value of one if firm's ultimate cash-flow right is lower than median of sample firms, and zero otherwise. In Panel B, *Dispute* refers to an indicator that has a value of one if a firm has involved in dispute over management right among family members. *No dispute* refers to an indicator that has a value of one if a firm has not involved in dispute over management right among family members. In Panel C, *High related party transaction* refers to an indicator that has value of one if firm's netsell ratio is higher than median of sample firms, and zero otherwise, where netsell ratio refers to the ratio of subtracting purchases from the sales between affiliates to its total sales. *Low related party transaction* refers to an indicator that has value of one if firm's netsell ratio is lower than median of sample firms, and zero otherwise. Control variables include *Size*, *Leverage*, *ROA*, *Cash holding*, *Tobin's q*, *Sales growth*, and *Firm age*. Industry, year indicators, and a constant are included in all specifications. The standard errors clustered at the firm level. ***, **, * indicate significance at 1%, 5%, and 10% level, respectively.

Panel A: Cash-flow right	Dependent variables			
	(1) RepRisk	(2) D_GOV	(3) D_SOCIAL	(4) D_ENV
Chaebol with succession × High cash-flow right	3.415***	1.078**	1.004**	0.973
	(2.58)	(2.47)	(2.11)	(1.66)
Chaebol with succession × Low cash-flow right	4.064	0.284	1.905	1.242
	(1.34)	(0.41)	(1.53)	(1.41)
Control variables	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Ind FE	YES	YES	YES	YES
Observations	653	653	653	653
R-squared	0.503	0.424	0.382	0.387
Panel B: Management rights dispute	Dependent variables			
	(1) RepRisk	(2) D_GOV	(3) D_SOCIAL	(4) D_ENV
Chaebol with succession × Dispute	0.775***	0.208**	0.253**	0.247**
	(3.23)	(2.55)	(2.27)	(2.25)
Chaebol with succession × No dispute	0.286	0.025	0.090	0.098
	(0.56)	(0.27)	(0.58)	(0.74)
Control variables	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	653	653	653	653
R-squared	0.507	0.424	0.385	0.399

(Continued)

Panel C: Related party transaction	Dependent variables			
	(1) RRI	(2) D_GOV	(3) D_SOCIAL	(4) D_ENV
Chaebol with succession × High related party transaction	1.249***	0.516***	-0.140	0.193
	(3.19)	(3.26)	(-0.50)	(0.66)
Chaebol with succession × Low related party transaction	-0.479	-0.395	-0.068	0.158
	(-0.27)	(-0.96)	(-0.12)	(0.24)
Control variables	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	653	653	653	653
R-squared	0.492	0.418	0.358	0.365

Table 5. Corporate Response to ESG Reputational Risk

The sample consists of 653 *chaebol* firms from 41 large business groups designated by the Korean Fair Trade Commission (KFTC). Each column reports the coefficients from an OLS regression with heteroscedasticity-robust standard errors. T-values are reported in parenthesis under the coefficient estimates. In Column 1, dependent variable is *D_Donation*, which refers to an indicator that has a value of one if a firm's donation ratio, measured as the ratio of donation to assets is higher than median of sample firms, and zero otherwise. In Column 2, dependent variable is *D_Advertisement*, which refers to an indicator that has a value of one if a firm's advertisement ratio, measured as the ratio of advertisement and promotion expense scaled by assets is higher than median, and zero otherwise. In Column 3, dependent variable is *D_Sustainability*, which refers to an indicator that has a value of one if a firm has published a sustainability report, and zero otherwise. In Column 4, dependent variable is *D_Fraud*, which refers to an indicator that has a value of one if a firm commits corporate fraud litigations that are related to several types of frauds including embezzlement, breach of trust, internal transaction, collusion, unfair trade, tax evasion, accounting, and disclosure frauds, and zero otherwise. In Column 5, dependent variable is *D_Correction*, which refers to an indicator that has a value of one if a firm commits corporate fraud cases with minor correction order is imposed, and zero otherwise. In Column 6, dependent variable is *D_Entertainment*, which refers to an indicator that has a value of one if a firm's entertainment ratio, measured as the ratio of entertainment expense to assets is higher than median, and zero otherwise. *Chaebol with succession* refers to an indicator that has a value of one if a firm belongs to a *chaebol* business group that undergo trans-generational succession process during the sample period, and zero otherwise. Control variables include *Size*, *Leverage*, *ROA*, *Cash holding*, *Tobin's q*, *Sales growth*, and *Firm age*. Industry, year indicators, and a constant are included in all specifications. The standard errors clustered at the firm level. ***, **, * indicate significance at 1%, 5%, and 10% level, respectively.

	Dependent variables (t+1)					
	(1)	(2)	(3)	(4)	(5)	(6)
	D_Donation	D_Advertisement	D_Sustainability	D_Fraud	D_Correction	D_Entertainment
Chaebol with succession	0.141*	0.249**	0.228**	-0.084**	0.008	-0.342***
	(1.70)	(2.31)	(2.05)	(-2.31)	(0.49)	(-3.16)
Control variables	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Observations	534	549	653	584	584	378
R-squared	0.419	0.491	0.557	0.150	0.151	0.437

Table 6. Instrument Variable Analysis

The sample consists of 48 *chaebol* firms from 41 large business groups designated by the Korean Fair Trade Commission (KFTC). Each column reports the coefficients from an OLS regression with heteroscedasticity-robust standard errors. T-values are reported in parenthesis under the coefficient estimates. Column 1 reports first stage results, and Columns 2 to 4 report the coefficients from the IV-2SLS regression. F-statistics from the first-stage regressions are reported at the bottom of the table. In Column 2, the dependent variable is *RepRisk*, which refers to the logarithm of highest level of RepRisk Index related to ESG issues over the last 24 months. In Column 2 to 5, the dependent variable is *D_GOV* [D_*SOCIAL, D_ENV*], which refers to the indicator that has a value of one if a firm is exposed to reputational risk related to a governance [social, environmental] issue, and zero otherwise. The instrument variable is *First son*, which refers to an indicator that has a value of one if the gender of the first child is male in a *chaebol* group, and zero otherwise. *Chaebol* with succession refers to an indicator that has a value of one if a firm belongs to a *chaebol* business group that undergo trans-generational succession process during the sample period, and zero otherwise. Control variables include *Size*, *Leverage*, *ROA*, *Cash holding*, *Tobin's q*, *Sales growth*, and *Firm age*. Industry, year indicators, and a constant are included in all specifications. The standard errors clustered at the firm level. ***, **, * indicate significance at 1%, 5%, and 10% level, respectively.

	First stage	Second stage			
	(1)	(2)	(3)	(4)	(5)
	Chaebol with succession	RepRisk	D_GOV	D_SOCIAL	D_ENV
First son	3.215***				
	(3.74)				
Fitted *chaebol* with succession		1.176***	0.250**	0.422***	0.460***
		(2.93)	(2.39)	(2.60)	(3.25)
F-statistic	14.42				
Control variables	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES
Observations	499	499	499	499	499
R-squared	0.434	0.467	0.382	0.318	0.359

Table 7. Robustness Tests

The sample consists of *chaebol* firms from 41 large business groups designated by the Korean Fair Trade Commission (KFTC). Each column reports the coefficients from an OLS regression with heteroscedasticity-robust standard errors. t-values are reported in the parenthesis under the coefficient estimates and are based on standard errors clustered at the firm level. In Panel A and Panel B, the dependent variable is *RepRisk*, which refers to the logarithm of highest level of RepRisk Index related to ESG issues over the last 24 months. In Panel A, the period of 2007-2008 is excluded to avoid the sudden effects during the global financial crisis. In Panel B, we use alternative period in succession replacing a succession period for the entire year of the *chaebol* with succession issues. In Panel C, we replace dependent variable, *RepRisk,* with alternative RRI measures, *D_RRI* and *D_Nevernews*. *D_RRI* refers to an indicator that has a value of one if a firm is exposed to a reputational risk related to ESG issues, and zero otherwise. *D_Nevernews* is an indicator that has a value of one if a firm is never exposed to a reputational risk related to ESG issues in all sample years, and zero otherwise. *High cash-flow right* refers to an indicator that has value of one if firm's ultimate cash-flow right is higher than median of sample firms, and zero otherwise. *Low cash-flow right* refers to an indicator that has value of one if firm's ultimate cash-flow right is lower than median of sample firms, and zero otherwise. *Dispute* refers to an indicator that has a value of one if a firm has involved in dispute over management right among family members. *No dispute* refers to an indicator that has a value of one if a firm has not involved in dispute over management right among family members. *High related party transaction* refers to an indicator that has value of one if firm's netsell ratio is higher than median of sample firms, and zero otherwise, where netsell ratio refers to the ratio of subtracting purchases from the sales between affiliates to its total sales. *Low related party transaction* refers to an indicator that has value of one if firm's netsell ratio is lower than median of sample firms, and zero otherwise. Control variables include *Size*, *Leverage*, *ROA*, *Cash holding*, *Tobin's q*, *Sales growth*, and *Firm age*. Industry, year indicators, and a constant are included in all specifications. The standard errors clustered at the firm level. ***, **, * indicate significance at 1%, 5%, and 10% level, respectively.

Panel A: Excluding financial crisis 2007-2008	Dependent variable: RepRisk			
	(1)	(2)	(3)	(4)
Chaebol with succession	0.523**			
	(2.00)			
Chaebol with succession × High cash-flow right		3.269**		
		(2.44)		
Chaebol with succession × Low cash-flow right		2.000		
		(0.67)		
Chaebol with succession × Dispute			1.386***	
			(3.15)	
Chaebol with succession × No dispute			-3.092*	
			(-1.84)	
Chaebol with succession × High related party transaction				0.697***
				(3.05)
Chaebol with succession × Low related party transaction				0.134
				(0.24)
Control variables	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	498	498	498	498
R-squared	0.445	0.446	0.449	0.442

(Continued)

Panel B: Succession within 10 years	Dependent variable: RepRisk			
	(1)	(2)	(3)	(4)
Chaebol with succession	0.498**			
	(2.09)			
Chaebol with succession × High cash-flow right		2.908**		
		(2.30)		
Chaebol with succession × Low cash-flow right		3.416		
		(1.17)		
Chaebol with succession × Dispute			1.241***	
			(3.17)	
Chaebol with succession × No dispute			0.053	
			(0.03)	
Chaebol with succession × High related party transaction				0.579**
				(2.46)
Chaebol with succession × Low related party transaction				0.293
				(0.59)
Control variables	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	653	653	653	653
R-squared	0.498	0.498	0.499	0.492

(Continued)

Panel C: Alternative RRI measures	D_RRI				D_Nevernews			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Chaebol with succession	0.168**				-0.181***			
	(2.35)				(-2.58)			
Chaebol with succession × High cash-flow right		0.956***				-0.829**		
		(2.87)				(-2.38)		
Chaebol with succession × Low cash-flow right		0.912				-1.248		
		(0.98)				(-1.45)		
Chaebol with succession × Dispute			0.322***				-0.272***	
			(3.48)				(-2.78)	
Chaebol with succession × No dispute			-0.195				0.026	
			(-0.39)				(0.05)	
Chaebol with succession × High related party transaction				0.224***				-0.219***
				(3.53)				(-3.56)
Chaebol with succession × Low related party transaction				0.043				-0.093
				(0.29)				(-0.63)
Control variables	YES	YES	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES	YES	YES
Observations	653	653	653	653	653	653	653	653
R-squared	0.429	0.428	0.433	0.417	0.506	0.502	0.508	0.491

Appendix Table A.1. List of *Chaebol* Groups

The sample consists of 48 large Korean business groups including 41 *chaebol groups* and 7 non-*chaebol groups*, designated by the Korean Fair Trade Commission (KFTC) from 2007 to 2015. Among the 41 business groups, 8 business groups undertook an intergeneration succession process during the sample period ("*chaebol* with succession"), whereas 33 business groups experienced no intergeneration succession over the same period ("*chaebol* without succession").

Type	No.	Group name
Chaebols with succession	1	Samsung
	2	LG
	3	Daelim
	4	Doosan
	5	Shinsegae
	6	Hyundai Motors
	7	Lotte
	8	Hanjin
Chaebols without succession	9	Kumho
	10	Hanhwa
	11	Dongyang
	12	Taihan Elect
	13	Hyundai
	14	SK
	15	Kolon
	16	Youngpoong
	17	CJ
	18	Hansol
	19	Hyundai Heavy Industry
	20	Hyundai Development
	21	KCC
	22	Se-Ah
	23	LS
	24	Taekwang
	25	Orion
	26	GS
	27	Daesung
	28	Dongbu
	29	Daekyo
	30	Nongshim
	31	KoreaLine(KLC)
	32	Samyang
	33	Ssangyong
	34	Amorepacific
	35	STX
	36	Woongjin
	37	Eugene
	38	Taeyoung
	39	Hankook Tire
	40	Halla
	41	Hanjin Heavy Industries
Non-*chaebol*	42	POSCO
	43	NH
	44	KT
	45	KEPCO
	46	KOGAS
	47	Munhwa Broadcasting Corporation
	48	KT&G

Appendix Table A.2. Succession and ESG Reputational Risk in *Chaebol* Firms

This table presents the regression results with the inclusion of all control variables to ensure transparency in the analysis, replicating the main results from Table 3. Both panels include the full set of control variables used in the analysis, as outlined in Section 3.2. Empirical design of the manuscript. Industry, year indicators, and a constant are included in all specifications. The standard errors clustered at the firm level. ***, **, * indicate significance at 1%, 5%, and 10% level, respectively.

Panel A: Full sample	Dependent variables				
	(1)	(2)	(3)	(4)	(5)
	RepRisk	RepRisk	D_GOV	D_SOCIAL	D_ENV
Chaebol with succession		0.617***	0.140**	0.164**	0.176**
		(2.87)	(2.30)	(2.12)	(2.38)
Chaebol	0.460***	0.274**	0.038	0.085*	0.040
	(3.80)	(2.11)	(0.99)	(1.93)	(1.28)
Size	0.029***	0.025***	0.008***	0.010***	0.010***
	(3.25)	(2.96)	(3.25)	(2.85)	(3.57)
Leverage	0.100	0.184	0.077	0.012	0.073
	(0.37)	(0.69)	(0.93)	(0.16)	(1.11)
ROA	0.613*	0.582*	0.183**	0.072	0.145**
	(1.81)	(1.72)	(2.09)	(0.80)	(2.06)
Cash holding	-0.425	-0.333	-0.017	-0.177	-0.004
	(-0.62)	(-0.50)	(-0.09)	(-1.16)	(-0.03)
Tobin's q	0.037	0.017	0.004	-0.033**	-0.004
	(0.59)	(0.27)	(0.21)	(-2.17)	(-0.35)
Sales growth	-0.003	0.003	-0.034	0.042*	0.003
	(-0.04)	(0.04)	(-1.56)	(1.92)	(0.24)
Firm age	0.075	0.058	-0.009	-0.002	-0.005
	(0.76)	(0.58)	(-0.33)	(-0.07)	(-0.23)
Constant	-0.147	-0.108	-0.009	0.066	-0.014
	(-0.39)	(-0.29)	(-0.08)	(0.57)	(-0.17)
Year FE	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES
Observations	2,245	2,245	2,245	2,245	2,245
R-squared	0.434	0.440	0.338	0.341	0.357

Panel B: *Chaebol* sample	Dependent variables			
	(1)	(2)	(3)	(4)
	RepRisk	D_GOV	D_SOCIAL	D_ENV
Chaebol with succession	0.625**	0.152**	0.203**	0.201**
	(2.47)	(2.25)	(2.16)	(2.37)
Size	0.019**	0.005**	0.007**	0.007**
	(2.58)	(2.21)	(2.19)	(2.45)
Leverage	0.443	0.232	-0.283	-0.052
	(0.67)	(1.16)	(-1.43)	(-0.28)
ROA	0.591	0.275	-0.111	0.106
	(0.65)	(0.96)	(-0.32)	(0.45)
Cash holding	0.072	-0.393	-0.182	0.290
	(0.05)	(-1.09)	(-0.32)	(0.69)
Tobin's q	0.183	0.042	-0.031	0.031
	(1.05)	(0.75)	(-0.54)	(0.54)
Sales growth	0.063	-0.031	0.051	-0.047
	(0.45)	(-0.60)	(1.41)	(-1.64)
Firm age	-0.167	-0.100*	-0.015	0.000
	(-0.93)	(-1.92)	(-0.21)	(0.00)
Constant	0.460	0.186	0.304	-0.034
	(0.64)	(0.88)	(1.03)	(-0.15)
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
Observations	653	653	653	653
R-squared	0.504	0.420	0.381	0.395

Appendix Table A.3. Variable Definitions

Reputational risk

RepRisk – The logarithm of the highest level of the RepRisk Index related to ESG issues over the last 24 months. The RepRisk Index ranged from 0 to 100.

D_GOV – An indicator that has a value of one if a firm is exposed to reputational risk related to a governance issue and zero otherwise.

D_SOCIAL – An indicator that has a value of one if a firm is exposed to reputational risk related to a social issue and zero otherwise.

D_ENV – An indicator that has a value of one if a firm is exposed to reputational risk related to an environmental issue and zero otherwise.

D_RRI – An indicator that has a value of one if a firm is exposed to reputational risk related to ESG issues, and zero otherwise.

D_Nevernews – An indicator that has a value of one if a firm is never exposed to reputational risk related to ESG issues in all sample years, and zero otherwise.

Chaebol variables

Chaebol – An indicator that has a value of one if a firm belongs to a *chaebol* group whose controlling shareholders are founding family, and zero otherwise.

Chaebol with Succession – An indicator that has a value of one if a firm belongs to a *chaebol* business group that undergoes a trans-generational succession process during the sample period, and zero otherwise. The succession is not limited to a specific generation but is measured across all generational transitions.

Cash-flow right – The percentage of shares of a given affiliate owned by *chaebol* families, measured by the sum of *chaebols*' direct ownership and indirect ownership.

High cash-flow right – An indicator that has a value of one if the firm's ultimate cashflow right is higher than the median of sample firms, and zero otherwise.

Low cash-flow right – An indicator that has a value of one if the firm's ultimate cashflow right is lower than the median of sample firms, and zero otherwise.

Dispute – An indicator that has a value of one if a firm is involved in succession disputes within *chaebol* or separated from the parent company and zero otherwise.

No dispute – An indicator that has a value of one if a firm is involved in disputes over management rights among *chaebol* family members.

Related party transaction – The ratio of purchases subtracted from sales between affiliates to total sales.

High related party transaction – An indicator that has a value of one if the firm's net sales ratio is higher than the median of sample firms, and zero otherwise.

Low related party transaction – An indicator that has a value of one if the firm's net sales ratio is lower than the median of sample firms, and zero otherwise.

First son – An indicator that has a value of one if the first child is male in a *chaebol* group, and zero otherwise.

Corporate action variables

D_Donation – An indicator that has a value of one if a firm's donation ratio, measured as the ratio of donation to assets, is higher than the median, and zero otherwise.

D_Advertisement – An indicator that has a value of one if a firm's advertisement ratio, measured as the ratio of advertisement and promotion expenses scaled by assets, is higher than the median, and zero otherwise.

D_Sustainability – An indicator that has a value of one if a firm publishes a sustainability report during the sample period, and zero otherwise.

D_Fraud – An indicator that has a value of one if a firm commits corporate fraud litigation related to several types of fraud, including embezzlement, breach of trust, internal transaction, collusion, unfair trade, tax evasion, accounting, and disclosure fraud, and zero otherwise. Corporate fraud is categorized into three types of ex-post measures: correction order, fine imposition, and prosecution, in order of low to high severity levels.

D_Correction – An indicator that has a value of one if a firm commits corporate fraud cases where a minor correction order is imposed, and zero otherwise.

D_Entertainment – An indicator that has a value of one if a firm's entertainment ratio, measured as the ratio of entertainment expenses to assets, is higher than the median, and zero otherwise.

Control variables

Size–Total assets scaled by 1 trillion (KRW)

Leverage–The ratio of the book value of total debt to total assets

ROA–The ratio of net income to total assets

Cash holding–The ratio of cash and cash equivalent to total assets

Tobin's q–the ratio of the market value of assets (the market value of common stock + book value of preferred stock + book value of debt) to the book value of assets.

Sales growth–Ratio of change in sales revenue to the prior year's sales revenue.

Firm age–Difference between the current fiscal year and year of establishment.