

Is board-tie among rivals harmful to customers? Evidence from banks' project-financing consortium

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Dates:

Received: 07 July 2022
Accepted: 26 Sept. 2022
Published: 30 Jan. 2023

How to cite this article:

Lee, S.K., & Lee, S. (2023). Is board-tie among rivals harmful to customers? Evidence from banks' project-financing consortium. *South African Journal of Business Management*, 54(1), a3573. <https://doi.org/10.4102/sajbm.v54i1.3573>

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Purpose: Are board ties among competitors harmful to customers? The prevalent assumption on board ties among competitors is that they harm customer benefits. This study examines the mechanism by which board ties with competitors result in an outcome conducive to customers.

Design/methodology/approach: Based on a sample of 79 savings banks in South Korea, we investigate the extent of banks' board ties with other banks and their engagement in a project financing (PF) consortium from 2014 to 2020. The generalised least square was adopted to test the hypotheses. We also performed several supplemental analyses to further support our results.

Findings/results: Savings banks with greater board ties with rivals provided more financial opportunities to their customers by forming PF consortia more actively with other banks. Furthermore, the positive impact of board ties on banks' participation in a PF consortium increases, especially when the proportion of external shareholders is smaller or when savings banks are family firms.

Practical implications: Outside directors can not only play the role of monitoring the management but also serve as assistants who can help banks provide financial services (or products) that banks could not provide individually.

Originality/value: While prior studies have clearly recognised the negative impacts on customers of board-friendship ties among rivals, little attention has been paid to the potential mechanism by which board ties among competing firms can benefit customers. This study challenges the dominant assumption by demonstrating that savings banks with greater board ties with other banks provide more financial opportunities to their economically weak customers.

Contribution: Finally, this study contributes to the family business literature by providing insight into how the unique characteristics of family firms in strategic choices make outside directors contribute as assistants than supervisors.

Keywords: Outside directors; coopetition; board of directors; savings bank; project-financing consortium; family firms; external shareholders.

Introduction

Management scholars have focused on outside directors to improve corporate governance. As outside directors are individuals not having a material or financial relationship with the company, they are relatively free from firms' internal pressures than other directors and can make better independent decisions (Baker & Faulkner, 1993). Consequently, outside directors are perceived as corporate supervisors, closely monitoring whether companies operate correctly and legally. Based on this widespread perception, board ties in the industry through outside directors have been viewed as socially undesirable or as an action that can create negative outcomes for customers (Westphal & Zhu, 2019). Board ties in an industry (e.g. interlocking directorates) arise when firms appoint executives of other competing firms to their board as outside directors or when the same individuals work as outside directors for more than two rivalrous firms. Scholars have long argued that board friendship among competing firms causes firms to collude to reduce competition by deliberately ignoring antimarket behaviours (Burt, 1983; Mizruchi, 1996; Palmer et al., 1986; Preffer & Salancik, 1978; Westphal et al., 2006). Westphal and Zhu (2019) empirically demonstrate that board-friendship ties among competing firms facilitate collusion by reducing competition within the industry, thereby severely damaging the potential benefits to customers.

However, while prior studies have clearly recognised the negative impacts of board-friendship ties among rivals on customers, little attention has been paid to the potential mechanism by which board ties among competing firms can benefit customers. This study challenges the prevailing assumption that outside directors act on the board primarily as corporate supervisors and that

board ties between competitors are therefore not desirable for customers. Specifically, we argue that outside directors can not only play the role of monitoring the management but also serve as an assistant who can help firms provide customers with services (or products) that firms could not provide individually. That is, if outside directors play a stronger role as an assistant, board-friendship ties among competing firms could rather be a potential source of greater benefits to customers. This is because board ties in an industry can increase firms' participation in cooptation (cooperation between competitors) by providing firms with reliable information, advice and networks critical for the creation of risky partnership in which partners' opportunistic behaviours for self-interest goals are most likely to occur.

In this study, based on a sample of 79 savings banks in South Korea, we investigate the extent of banks' board ties with other banks and their participation in a project financing (PF) consortium (cooptation among savings banks) during 2014–2020. Project financing loans are business loans that savings banks provide to small and medium-sized enterprises (SMEs) or start-ups with high future potential, despite their current weak performance. Project financing is a very risky loan for banks because it lends money only with business potential rather than actual collateral. Because of the risky nature of PF loans, banks do not actively participate in PF loans unless it is a joint consortium with other banks. However, once PF loans are made in the form of a consortium, the bank's excellent risk management skill and business project evaluation know-how would be disclosed to other rivalrous banks. As a result, banks rarely participate in PF consortia with other banks that are likely to conduct opportunistic behaviours to preserve their risk management and project evaluation skills.

Under these circumstances, we demonstrate that the greater the extent of board ties in an industry, the greater the bank's participation in the PF consortium. In other words, contrary to the widespread prediction that board ties between competitors harm the benefits of customers, savings banks with greater board ties with other banks provide more financial opportunities to their economically weak SME customers by forming PF consortia more actively with other banks. This suggests that outside directors, as corporate assistants providing banks with reliable information, networks and advice needed to form the risky PF consortium. Furthermore, the positive effect of board ties in an industry on banks' likelihood in the PF consortium is more pronounced, especially when families own savings banks or external shareholders have smaller equity shares. Thus, our results imply that the outside directors' role is not fixed, as supervisors or assistants. However, it can vary within the continuum between supervisor and assistant, depending on the family ownership or control and the ratio of external shareholders.

This study makes several significant contributions to the literature. Firstly, we provide new insight to the field of corporate governance by demonstrating that the higher the

board ties among competitors, the greater the benefits to customers because of firms' active participation in cooptation. Secondly, by recognising board ties through outside directors as an intended outcome for the successful formation of cooptation, we suggest that outside directors can play active roles as assistants, providing companies with reliable information, networks and advice to form the risky cooptation. Thirdly, we offer a new mechanism by which external shareholders affect management, arguing that the significant roles of outside directors can change as the ratio of external shareholders varies. Fourthly, we explain how the unique characteristics of family firms in making strategic choices result in outside directors playing a more active role as assistants than supervisors.

Theory and hypotheses

Increasing firms' participation in cooptation through board ties among rivals

Prior studies have argued that when a firm's outside directors have friendship ties with rivals, such ties have the potential to effectively facilitate interfirm collusion and reduce competition, thereby damaging the benefits to customers (Baker & Faulkner, 1993; Burt, 1983; Ingram & Roberts, 2000; Mizruchi, 1996; Palmer et al., 1986; Pfeffer & Salancik, 1978; Uzzi, 1997; Westphal et al., 2006; Westphal & Zhu, 2019; Zajac & Bazeran, 1991). However, we argue that board ties among competing firms can benefit customers. This is because board ties within the industry can affect positively the formation of cooptation that could bring customers services (or products) that the firm could not bring individually. Specifically, we argue that outside directors serve as corporate assistants providing the necessary information, networks and advice that companies may need to better identify potential partners for risky cooptation. Therefore, while prior studies have emphasised the role of outside directors as corporate supervisors closely monitoring legal and transparent management, this study emphasises their role as corporate assistants helping companies create risky cooptation.

Cooptation can provide a mechanism by which new values, markets and opportunities can emerge for customers (Luo et al., 2006). Traditional collusion, such as oil cartels, harms customers' benefits by reducing competition in the market and enhancing their collective bargaining power against customers (Fischer & Normann, 2019). In cooptation, however, competitors cooperate to achieve common goals while they compete in the market to enhance their individual competitiveness, thereby not reducing market competition (Bouncken et al., 2015). In other words, in cooptation, firms cooperate for productive goals while competing in the market. Consequently, new potential opportunities and values can be created, thereby increasing the pie of the entire market and ultimately providing greater benefits to customers (Vanyushyn et al., 2018). The most common case for cooptation to increase the potential benefits to customers is to enable competing firms to collaborate to provide what would not have been possible for customers if the

company had done it alone. For example, Sony and Samsung collaborated to develop and produce cutting-edge liquid crystal displays (LCDs) that would have been difficult to launch if they had done so alone, thereby providing new LCD products for customers (Gnyawali & Park, 2011). Likewise, while competing fiercely in the premium automobile market, Mercedes and BMW have engaged in joint partnerships in research and development (R&D) for future vehicles, which can provide greater value to customers in better autonomous driving technology (Akpınar & Vincze, 2016). In the airline industry, most airlines share customer information and baggage systems to provide more diverse routes and efficient services for passengers while increasing their competitiveness in the market (Lazzarini, 2007).

However, while cooptation can benefit customers, it is admittedly the most dangerous interfirm relationship that is likely to fail because of partners' opportunistic behaviours. Owing to the paradoxical nature of the relationship, Pellegrin-Boucher et al. (2013) suggested that firms could face a 'dangerous situation' because cooptation inevitably involves a struggle between generating value together for the purpose of collaboration and pursuing their individual competitiveness by appropriating resources and capabilities. In such a paradoxical relationship, partners are more likely to engage in a 'learning race' in which each partner seeks to hold back their personal knowledge while opportunistically pursuing self-interest goals, thereby generating a vicious circle that weakens the cooperative relation (Bouncken & Kraus, 2013). Therefore, cooptation is a 'double-edged sword' (Bouncken & Fredrich, 2012, p. 2060) that is characterised by increased interfirm risks and conflicts despite its potential benefits to the firm's innovation, performance and competitiveness. Because of the paradoxical nature of cooptation, where today's allies can easily turn into tomorrow's enemies (Morris & Hergert, 1987), cooptation can affect the competitive positions of participating firms, which can lead partners to engage in greater opportunistic behaviours to pursue their self-interest goals at the expense of collective goals (Bengtsson & Kock, 2000).

Therefore, when engaging in such risky partnerships, it is more crucial than any other interfirm relationship for firms to have individuals who can provide reliable information, advice and networks regarding potential partners. The riskier the collaboration is expected to be, the better the company must choose partners based on reliable information and networks to establish greater interfirm stability (Shah & Swaminathan, 2008; Mindruta et al., 2016). This study argues that outside directors can enhance firms' participation in risky cooptation by providing reliable information, advice and networks about potential partners. Most outside directors have experience as outside directors of companies in the same industry (Fahlenbrach et al., 2010; Lee et al., 2012). Those outside directors of more than two firms in the same industry can have better access to external networks than internal directors. In addition, outside directors who are executives of other competing firms can have better internal networks within their firms because they are executives of their main firms. Indeed, firms frequently hire outside

directors from the same industry to overcome the lack of networks within the industry (Arosa et al., 2010; Bettinelli, 2011). Thus, when firms seek partnerships with competitors, outside directors, especially in the same industry, can be intermediaries, providing reliable external links.

In addition to acting as an intermediary to connect reliable potential partners in the industry, outside directors – especially working in the same industry – can also provide valuable information and advice to top executives when considering competition-based strategy. Given that they are those who are executives of other competing firms or those who have worked as outside directors in more than two companies in the industry for a long time (Kim et al., 2014; Lai et al., 2019), they are more likely to be aware of the potential candidate company's tendencies or inside information that firms may need for working with other competing firms. At the least, they may be associated with someone who has such information. Research suggests that firms often appoint directors to their boards to gain access to important resources or partners' secret information (Hillman & Dalziel, 2003; Salancik & Pfeffer, 1978). Such resources and secret information about other companies are a crucial factor when searching for potential partners for the formation of collaboration (Shah & Swaminathan, 2008). Again, unlike other types of general interfirm collaboration, the cooptation entails a higher risk of failure (Park & Russo, 1996), and therefore, it is necessary for companies to know the propensity and information of potential partners in advance.

To sum up, although cooptation provides a mechanism by which the benefit of customers can become greater, it is a very risky relationship where partners' opportunistic behaviours to pursue their self-interest goals are most likely to occur. Thus, companies need individuals who can provide reliable information, advice and networks about potential partners to ensure the stability of risky partnership. Outside directors within the industry can play such a critical role, leading to firms' active participation in cooptation.

Thus, the study proposes the following hypothesis:

Hypothesis 1 (H1): The higher the board ties in the industry through outside directors, the more active firms participate in cooptation that potentially benefits customers.

Proportion of external shareholders that determines the primary role of outside directors

The first hypothesis argues that outside directors can serve as assistants providing firms with reliable information, advice and networks about potential partners for the stability of risky cooptation. However, we predict that the role of outside directors is not fixed as a supervisor or assistant, implying that their role can change depending on the context. Specifically, this study argues that their primary roles can vary according to governance characteristics. Thus, in some cases, outside directors may spend much of their time and effort in helping firms better achieve risky cooptation, but in other cases, they tend to spend much of their time monitoring

whether companies are managed legally and properly. As a result, the positive relationship between board ties in the industry and firms' participation in cooptation will be enhanced or reduced, depending on the governance characteristics of the firm.

Specifically, we maintain that the proportion of external shareholders is a critical factor affecting the primary role of outside directors on the board. The higher the ratio of external shareholders, the greater their influence on the board; thus, a strong supervisory function for legitimate and transparent management is required. Given that corporate supervision is the most critical job of outside directors, we suggest that whether the primary role of outside directors is close to that of the supervisor or assistant depends on the proportion of external shareholders. In a situation where outside directors' ability, attention and time are valuable and limited (Tuggle et al., 2010), they are more likely to act as assistants if they are relatively less burdened by corporate monitoring. On the other hand, if outside directors are strongly required to thoroughly monitor a company because of the strong influence of external shareholders on the board, they are more likely to devote their limited resources and attention to overseeing management instead of providing reliable networks, information and advice for risky competition.

The important point here is that the mere existence of external shareholders does not imply that outside directors will lose their role as corporate assistants on the board. Even if the proportion of external shareholders is high, outside directors can play a role as assistants. However, given that every individual faces a limit on their abilities and resources (Tuggle et al., 2010), outside directors have to prioritise their works according to task importance and devote their limited capabilities, resources and attention to more important imperatives. External shareholders require outside directors to monitor management. Therefore, when the ratio of external shareholders is high, outside directors are more likely to spend more of their limited time and effort acting as a monitor rather than as an assistant.

Therefore, the study proposes the following hypothesis:

Hypothesis 2 (H2): The lower the ratio of external shareholders, the stronger is the positive relationship between board ties in the industry and firms' participation in cooptation.

Familiness that enhances the role of outside directors as corporate assistants

We provide the third argument, that the primary role of outside directors may also change depending on the ownership type. Firms can be divided into family and nonfamily firms. Family business research has demonstrated that family involvement in business can cause family firms to make strategic choices different from those of their nonfamily counterparts (Gibb Dyer, 2006; Gomez-Mejia et al., 2010).

This study argues that the unique characteristics of family firms in strategic choices result in outside directors playing the role of assistants more actively than supervisors.

The unique strategic choice of family firms manifests in the selection process of top executives. In nonfamily firms, executives are retained and rewarded according to their managerial ability and recent performance (Boyd & Salamin, 2001). In addition, top executives are selected as individuals with excellent performance, leadership and managerial ability among internal groups of employees. If there are no such excellent talents inside, a rigorous hiring programme is then employed to effectively identify external persons with excellent managerial skills. However, family firms do not appoint top executives or even chief executive officers (CEOs) based solely on managerial competence and recent performance, because economic efficiency (or profit maximisation) is not the foremost reference point in family firms' principles for making strategic choice (Minichilli et al., 2014). Rather, preserving current socio-emotional wealth (SEW), the emotional and nonfinancial value attached by family members to their firm, is a primary consideration of family firms in making major decisions (Berrone et al., 2012). Consequently, a family business might be passed on to the eldest son of the family or to those who can successfully preserve current SEW, instead of to talented individuals. For example, Bennedsen et al. (2007) show that because of concerns over losing their family heritage, especially among the top management team, family firms exhibit a strong aversion to replacing family member CEOs or executives with nonfamily members with better managerial capabilities and external networks, thereby losing potential opportunities to maximise the firms' economic values for public shareholders.

When firms consider a cooptation-based strategy, a thorough investigation of potential partners is essential because cooptation has a greater risk of failure than other interfirm collaborations (Park & Russo, 1996). Moreover, even when negotiating with partners for cooptation, top executives must have excellent bargaining and communication skills to reduce their potential opportunistic behaviour. Therefore, top executives in family firms, appointed heavily based on family factors (e.g. SEW consideration) rather than their actual abilities, performance and leadership, are more likely to have fewer managerial skills critical for the stability and success of cooptation than those of nonfamily firms. Thus, executives of family firms try to overcome their lack of managerial and negotiation skills by hiring external experts. Family firms, particularly small ones, frequently hire outside directors who have worked in the same industry to overcome the lack of industrial expertise (Arosa et al., 2010; Bettinelli, 2011). Jones et al. (2008) demonstrated that family firms prefer to appoint affiliate directors to the board (those with a business network with the firm), even if this constrains the board's ability to monitor management and provide independent advice. Given that family firms usually appoint outside directors to overcome their lack of managerial skills and leadership, outside directors appointed by family firms

are more likely than those of nonfamily firms to act as corporate assistants to meet the expectations held by family executives toward outside directors.

Therefore, the study proposes the following hypothesis:

Hypothesis 3 (H3): The positive relationship between board ties in an industry and firms' engagement in coepetition is stronger in family firms than in nonfamily firms.

Methods

Samples

To empirically evaluate the hypotheses, we observed the PF consortium activities of a total of 79 South Korean savings banks between 2014 and 2020. Although savings banks started PF consortia in the mid-2000s, the Korea Savings Banks Federation has statistically collected PF consortium loans since 2014. We investigate whether there is a systematic difference in the bank's participation in joint-loan PF consortium according to the extent of board ties among rivals and the proportion of external shareholder and family ownership. The main data sources for this study are the periodic disclosure data released on each savings bank's website, the proxy statement filed with the Korean Financial Supervisory Service and the data on annual savings bank consortium loan status provided by the Korea Savings Banks Federation.

Measurement

Independent variable

The independent variable, *board ties* in an industry, is measured as follows:

$$= \frac{\text{number of directors who satisfies one of the following two conditions}}{\text{number of board members}} * 100 \quad [\text{Eqn 1}]$$

We set two conditions as follows: (1) serving as executives of other savings banks or (2) serving as directors at two or more savings banks simultaneously.

Dependent variable

The dependent variable in our study is as follows:

$$PF \text{ consortium participation} = \frac{\text{Annual project financing consortium total}}{\text{Annual loan total}} * 100 \quad [\text{Eqn 2}]$$

The dependent variable in our study is the extent to which a firm engages in coepetition that could provide customers with services (products) that they could not provide individually. The most popular case for this type of action is forming a loan consortium with other banks for lending money to economically weak borrowers lacking sufficient cash flow and/or collateral. In so doing, the bank can minimise the default risk to a certain extent compared to lending money alone. Project financing loans are among the

most dangerous loans provided by savings banks. They are mainly offered to small and medium-sized construction companies; banks lend money based on the future business's potential instead of collateral, such as a building or land. Thus, if the borrower is declared bankrupt, savings banks cannot recover their principal and interest, resulting in massive financial losses. Under these circumstances, having multiple banks create a PF consortium means that banks take a substantial risk together with other banks to provide their SME customers with financial opportunities for future growth. However, because loans are made in a consortium with other banks, the banks' outstanding risk management expertise and construction project evaluation skills may be disclosed to rivalrous banks. Thus, PF consortia are rarely created among savings banks likely to conduct opportunistic behaviours to preserve their risk management and project evaluation skills.

As our measurement is novel and context-dependent, it may lack validity. Therefore, we interviewed five experts (two financial analysts, two bankers and one journalist) to check whether our measurement measures what it intends to measure. In the interviews, all experts agreed that our measurement was a good measure of banks' willingness to cooperate with rivals on behalf of their customers. Particularly, they opined that it is appropriate to consider only PF consortia as a dependent variable and not all joint loans in which savings banks participate. The reason is that, in the case of other joint-loan consortia, all banks in the consortium are provided with collateral, so they do not bear the default risk together on joint loans like the PF consortium. Thus, the significant factors for engaging in such joint loans are more likely to be each bank's profitability, size or collateral than banks' willingness to cooperate with other banks for customers' benefit. Therefore, our interviews verified the validity of measuring only the PF consortium as a dependent variable, not the entire joint loan consortium.

Moderating variable

External shareholders ratio is measured by dividing the total share of external shareholders by the total share. In other words:

$$External \text{ shareholders ratio} = \frac{\text{Total share of external shareholders}}{\text{Total share}} * 100 \quad [\text{Eqn 3}]$$

External shareholders are defined in two ways. In the case of individuals, external shareholders are those who are not the members of founding family, executives, directors or employees. In the case of institutions, external shareholders are those which are not parent companies, subsidiaries or affiliates.

Also, *family firms*, another moderating variable, is binary, which equals 1 if the company is a family firm and 0 otherwise. Following prior studies on family businesses

(Anderson & Reeb, 2003; Feldman et al., 2016; Villalonga & Amit, 2010), we defined family firms as those in which the founder or at least one founding family member by blood or marriage is (1) a CEO or president or (2) the largest shareholder or has at least 20% of the shares, either individually or as a group. The savings banks' ownership structure and information on the CEOs and board members were manually obtained through regular disclosure data on the bank's respective websites.

Control variables

We consider numerous firm- and CEO-level control variables influencing the dependent variable to reduce the confounding effect. Firstly, *corporate loan ratio* was considered a control variable. This variable is a proxy for banks' resource constraints, because banks with constrained internal resources and capabilities are more likely to implement simple household loans than complex corporate loans (Paravisini, 2008). Therefore, savings banks that lack internal resources can more actively participate in cooperation to overcome the lack of resources. Secondly, the *PF ratio*, the ratio of actual PF amounts to the bank's maximum limit on PF, was included as a control variable. Because PF loans are risky loans invested considering only the project's potential, financial authorities set limits on PF loans for each bank. A high PF ratio signals a substantial risk because of actual PF loans compared to the limit. Therefore, banks are more likely to form PF consortia with other banks to reduce the overall risk from PF loans. We also controlled for the performance of each bank. Banks that perform well on their own may be less involved in consortia because they rely less on external partners. Performance was measured by *return on assets*. Financially sound banks tend to operate conservatively. Financial stability was measured using the Bank for International Settlements (BIS) *ratio*. We also controlled for the *company size*. Larger banks are less inclined to engage in consortia, as they already have diverse resources and capabilities to independently generate revenue. Company size is measured using the number of employees in the bank. *Firm age* can also impact the participation level of the PF consortium, because firms tend to value tradition and reject change as they age. In addition to the firm-level control variables, the CEO-level control variables may affect banks' engagement in the PF consortium. *The replacement of the CEO* is an event that suddenly changes a bank's operations. This variable has a value of 1 if CEO replacement occurs and 0 otherwise. The variables *CEO tenure* and *age* were also controlled. Typically, the older the CEO and the longer the CEO's tenure, the greater the rejection of new business strategies.

Model

The database used in our study was a panel dataset. The generalised least squares (GLS) method is suggested as most suitable for statistically examining panel data sets because this method can effectively handle the problem of cross-sectional heteroskedasticity and within-unit serial correlation (Dielman, 1983). Hence, we adopted the GLS method to test the hypotheses. The GLS regression model can be

implemented using either a random- or fixed-effects model. A random-effects model assumes that the firm-specific residual has a distribution with a variance of σ_v^2 whereas a fixed-effect model assumes that the variance of the firm-specific residuals is 0 and thus has no distribution. The Hausman test was used, where the null hypothesis is that a random-effect model is recommended to decide between random or fixed effects. The Hausman test showed a p-value of 0.63. Thus, random-effects GLS regression was adopted for hypothesis testing. However, we also tested our hypotheses using a fixed-effects model, with broadly consistent results with our main analyses using a random-effects model. The analysis was conducted in Stata (StataCorp LLC, College Station, Texas, United States) using the program's *xt* family of commands, specifically designed to cope with panel databases. We lagged all independent, moderating and control variables 1 year.

Ethical considerations

The Institutional Review Board at Gachon University has reviewed the proposal identified above and has determined that it is exempt from further IRB review. This exemption applies only to the proposal – as written – and currently on file with the IRB. Any change potentially affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption (ref. no. 1044396-202207-HR-150-01).

Results

Table 1 presents the descriptive statistics and Pearson product-moment correlations of the variables. All ratio variables (-1 to 1) in our model are multiplied by 100. All variables were tested for normality, and those found to be not normal were Box-Cox transformed. We calculated the variance inflation factors (VIF) within acceptable ranges to test for multicollinearity. The VIFs for all variables were significantly lower than the cut-off (of 10) recommended in prior studies (Kutner et al., 2004).

Table 2 presents the results of the primary analysis. Model 1 predicts the degree of participation in the PF consortium using only the control variables. It is valuable to ascertain the factors associated with the extent of firms' involvement in cooperation, considering the lack of empirical research on the factors for cooperation formation. In Table 2, the corporate loan ratio is positively associated with the degree of bank participation in the PF consortium. In contrast, firm size and CEO replacement are negatively associated with the participation in the PF consortium.

We now discuss the results of the primary analysis of this study. Model 2 adds the variable of board ties in the industry to Model 1. As shown in Table 2, the estimated coefficient of board ties is 0.256 with a p-value of 0.002, suggesting that savings banks with a greater degree of board ties within an industry participate more actively in the PF consortium. Thus, H1 was supported.

TABLE 1: Descriptive statistics and correlation matrix.

Variable	Obs.	Mean	SD	Minimum	Maximum	1	2	3	4	5	6	7	8	9	10	11	12	13	
1. PF consortium participation	553	3.97	3.43	0.00	15.85	1.00	-	-	-	-	-	-	-	-	-	-	-	-	-
2. Board ties	553	33.45	18.96	0.00	71.42	0.63***	1.00	-	-	-	-	-	-	-	-	-	-	-	-
3. External shareholder ratio	553	41.55	36.38	0.00	100.00	0.50***	0.18**	1.00	-	-	-	-	-	-	-	-	-	-	-
4. Family firms	553	0.49	0.50	0.00	1.00	0.39***	0.17	0.92	1.00	-	-	-	-	-	-	-	-	-	-
5. Corporate loan ratio	553	61.64	21.76	0.00	99.15	0.20***	0.26***	0.08*	0.420	1.00	-	-	-	-	-	-	-	-	-
6. PF ratio	553	45.00	28.05	0.00	96.14	0.21***	0.07	0.03	0.49***	-0.13*	1.00	-	-	-	-	-	-	-	-
7. Return on assets	553	45.80	8.80	-11.72	189.00	-0.05	-0.05	-0.05	0.02	0.26***	0.09*	1.00	-	-	-	-	-	-	-
8. BIS ratio	553	2.04	11.66	-110.32	56.82	0.21***	0.34***	0.08	0.82	0.08	-0.03	0.10*	1.00	-	-	-	-	-	-
9. Firm size	553	13.61	167.63	15.00	1143.00	-0.31***	-0.42***	-0.11**	-0.28***	-0.06	-0.17**	0.08	-0.21***	1.00	-	-	-	-	-
10. Firm age	553	31.65	15.14	0.00	49.00	0.24***	0.53***	0.10*	0.27***	-0.42***	0.12*	0.04	0.22***	-0.41*	1.00	-	-	-	-
11. CEO replacement	553	0.04	0.19	0.00	1.00	-0.07	-0.12*	-0.04	-0.02	0.53***	-0.03	0.06	-0.13*	0.01	-0.06	1.00	-	-	-
12. CEO tenure	553	8.20	3.61	1.00	20.00	0.12**	0.408***	0.01	0.05	-0.10*	-0.09*	-0.05	0.26***	-0.18*	0.19***	-0.39*	1.00	-	-
13. CEO age	553	60.78	4.73	49.00	78.00	0.08	0.237***	-0.01*	-0.10*	0.17	-0.06	-0.09*	0.08	-0.05	0.01*	-0.16*	0.49	1.00	-

Note: * p -value < 0.05, ** p -value < 0.01, *** p -value < 0.001.
 PF, project financing; BIS, Bank for International Settlements; CEO, chief executive officer; SD, standard deviation.

H2 predicts that the lower the ratio of external shareholders, the stronger is the positive relationship between board ties in the industry and firms' participation in cooperation. For example, in Model 3, the predicted coefficient of the interaction term between board ties and the proportion of external shareholders is 0.116, with a p -value of 0.012. Therefore, H2 is also supported. In other words, the lower the ratio of external shareholders, the stronger the relationship between board ties in an industry and bank participation in PF consortia with rivals.

H3 predicts that the positive relationship between board ties within the industry and firms' engagement in cooperation is stronger in family firms than in nonfamily firms. For example, in Model 4, the estimated coefficient of the interaction term between board ties and family firms is 0.335 with a p -value 0.017. This implies that the positive effect of board ties in an industry on banks' willingness to engage in PF consortia with rivals becomes more pronounced in family-controlled savings banks than in their nonfamily counterparts. Therefore, H3 is supported.

Supplemental analyses

We conducted a number of additional analyses to further support our empirical results and theoretical arguments. Firstly, to investigate the potential for endogeneity in our models, we estimated the impact threshold for confounding variable scores for our independent variables of interest (Hubbard et al., 2017), employing the confound command in Stata. The impact thresholds of the (hypothetical) omitted variables were consistently larger than the impact of included variables in the models, providing some evidence that omitted variables are not a concern in our analyses.

We implemented an alternative test by employing a different approach to measure the independent variable. Originally, we measured the board ties in an industry as the proportion of directors on the board who are senior executives of another bank or directors at two or more banks at the same time. However, while this approach is common to the field of interlocking directorates (Oh & Barker, 2018), it simply assumes that the outside directors have the same information and network for a PF consortium. However, in reality, the longer people have been in the banking industry, the more information, experience, and network they have about the PF consortium. Therefore, to enhance the robustness of our results, we measured board ties within an industry as the total tenure (years) of directors who are senior executives of another bank or directors at two or more banks at the same time divided by total tenure (years) of all directors on the board. Table 3 indicates that all hypotheses are still supported, with a different measurement of board ties in an industry.

We also conducted supplemental analysis of the survey data to corroborate our theoretical argument that cooperation could provide customers with services (or products) that the firm could not provide individually. To corroborate our argument, we surveyed a random sample of 200 executives

TABLE 2: Results of random-effect generalised least square regression.

Variables	Model 1		Model 2		Model 3		Model 4	
	Coefficient	<i>p</i>	Coefficient	<i>p</i>	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Board ties	-	-	0.256 (0.020)	0.002	0.145 (0.020)	0.025	0.161 (0.019)	0.028
External shareholder ratio	-	-	-	-	0.215 (0.014)	0.296	-	-
Board ties*External shareholder ratio	-	-	-	-	0.116 (0.001)	0.012	-	-
Family firm	-	-	-	-	-	-	4.687 (1.287)	0.593
Board ties*Family firms	-	-	-	-	-	-	0.335 (0.036)	0.017
Corporate loan ratio	0.011 (0.005)	0.021	0.013 (0.005)	0.008	0.012 (0.005)	0.016	0.012 (0.005)	0.013
PF ratio	0.001 (0.002)	0.940	0.001 (0.003)	0.947	0.001 (0.003)	0.932	0.001 (0.003)	0.901
Return on asset	0.002 (0.001)	0.221	0.001 (0.001)	0.188	0.001 (0.001)	0.231	0.001 (0.001)	0.203
BIS ratio	0.005 (0.003)	0.112	0.005 (0.003)	0.079	0.005 (0.001)	0.072	0.005 (0.002)	0.072
Firm size	-0.002 (0.001)	0.031	-0.002 (0.001)	0.028	-0.001 (0.001)	0.393	-0.001 (0.001)	0.142
Firm age	0.011 (0.012)	0.400	0.011 (0.012)	0.367	-0.001 (0.012)	0.969	0.002 (0.013)	0.906
CEO replacement	-0.103 (0.121)	0.029	-0.105 (0.122)	0.039	-0.122 (0.121)	0.031	-0.125 (0.118)	0.050
CEO tenure	0.003 (0.012)	0.791	0.002 (0.015)	0.83	-0.006 (0.013)	0.617	-0.005 (0.013)	0.704
CEO age	-0.005 (0.009)	0.621	-0.003 (0.009)	0.71	-0.005 (0.011)	0.595	-0.005 (0.001)	0.638
Constant	3.308 (1.091)	0.002	0.261 (1.085)	0.810	0.453 (0.929)	0.625	0.532 (0.931)	0.567
Sigma_u		3.284		2.577		2.262		2.451
Sigma_e		0.346		0.364		0.347		0.346
Rho		0.988		0.982		0.977		0.981
Wald chi-square		57.61		85.69		176.96		124.14
Number of observations		553		553		553		553

Note: Standard errors are in parentheses.

* *p*-value < 0.05.

PF, project financing; BIS, Bank for International Settlements; CEO, chief executive officer.

TABLE 3: Alternative test with the different measure of board ties via outside directors.

Variables	Model 5		Model 6		Model 7		Model 8	
	Coefficient	<i>p</i>	Coefficient	<i>p</i>	Coefficient	<i>p</i>	Coefficient	<i>p</i>
Board ties (alternative measure)	-	-	0.261 (0.018)	0.005	0.152 (0.030)	0.028	0.147 (0.029)	0.004
External shareholder ratio	-	-	-	-	0.182 (0.024)	0.175	-	-
Board ties*External shareholder ratio	-	-	-	-	0.211 (0.001)	0.038	-	-
Family firm	-	-	-	-	-	-	4.724 (1.407)	0.285
Board ties*Family firms	-	-	-	-	-	-	0.329 (0.031)	0.022
Corporate loan ratio	0.011 (0.005)	0.026	0.011 (0.005)	0.024	0.011 (0.005)	0.024	0.010 (0.005)	0.043
PF ratio	0.001 (0.003)	0.904	0.002 (0.003)	0.931	0.002 (0.003)	0.931	0.001 (0.003)	0.881
Return on asset	0.001 (0.001)	0.221	0.007 (0.006)	0.234	0.007 (0.006)	0.234	0.006 (0.001)	0.269
BIS ratio	0.005 (0.003)	0.101	0.005 (0.027)	0.101	0.005 (0.027)	0.101	0.004 (0.003)	0.125
Firm size	-0.001 (0.001)	0.22	-0.008 (0.006)	0.002	-0.008 (0.006)	0.002	-0.004 (0.001)	0.031
Firm age	0.003 (0.014)	0.84	0.003 (0.014)	0.793	0.003 (0.014)	0.793	0.003 (0.012)	0.981
CEO replacement	-0.123 (0.112)	0.029	-0.122 (0.128)	0.021	-0.134 (0.128)	0.017	-0.126 (0.122)	0.039
CEO tenure	-0.004 (0.014)	0.766	-0.004 (0.013)	0.792	-0.004 (0.013)	0.792	-0.005 (0.128)	0.685
CEO age	-0.005 (0.009)	0.643	-0.004 (0.009)	0.662	-0.004 (0.009)	0.662	-0.006 (0.009)	0.513
Constant	0.518 (0.968)	0.593	1.241 (0.881)	0.159	1.241 (0.881)	0.159	2.135 (0.946)	0.024
Sigma_u		2.805		2.761		2.661		2.874
Sigma_e		0.346		0.358		0.316		0.322
Rho		0.985		0.984		0.984		0.982
Wald chi-square		57.61		87.27		156.96		144.14
Number of observations		553		553		553		553

Note: Standard errors are in parentheses.

* *p*-value < 0.05.

PF, project financing; BIS, Bank for International Settlements; CEO, chief executive officer.

from savings banks with at least one engagement in a PF consortium between 2014 and 2020. The response rate was 38% ($N = 76$). The firms at which these executives served were not significantly different from the firms of nonrespondents with respect to the level of board ties and the level of engagement in PF consortia. We asked the executives to what extent they would agree with the statement that they would not make a PF loan to the same customer unless it was a consortium (five-point Likert-type scale: strongly disagree – disagree – neither agree nor

disagree – agree – strongly agree). Sixty-eight out of 76 executives agreed or strongly agreed with this statement (89%). We also corroborate our argument that reliable information, advice and networks about potential partners are very important for the creation of cooptation. We asked the same 76 executives how important it is to have reliable information, advice and networks regarding potential partners for the formation of PF loan consortium (10-point scale from 1 to 10: the more important, the higher the score). The average score is 8.74 points. Our theoretical argument

also suggested that board-ties within the industry via outside directors can be important source of reliable information, advice and networks about the potential partners of cooperation. To corroborate our argument, we asked 76 executives how much they rely on outside directors in the same industry for obtaining information, advice and networks regarding potential partners of a PF consortium (10-point scale from 1 to 10: the more they depend, the higher the score). For those executives who do not have outside directors in the same industry on the board, we asked them to rate by assuming that they have such directors. The average score is 8.25 points. Overall, these survey data provide evidence that corroborates our theoretical arguments.

In addition, throughout this study, we argue that cooperation provides benefits to customers. However, even though banks provide more financial opportunities to customers via consortia, if the interest rate of the consortium is very high, it will be difficult to judge that it is actually beneficial to customers. Therefore, we corroborate this argument by examining whether the interest rate of a PF consortium is lower than that of a general PF loan (not consortium). We obtained the average interest rates of PF consortia weighted by loan amount and that of a general PF loan weighted by loan amount from 2014 to 2020 for each bank. The average interest rate of a PF consortium was 8.82%, and that of a general PF loan was 11.07%. A *t*-test was performed to examine if there was a mean difference between the two. The result showed that the mean of the interest rate of a PF consortium is lower than that of a general PF loan with a *p*-value less than 0.001. Therefore, considering that the PF consortium enables banks to provide more financial opportunities to their customers at lower interest rates, the result supports our argument that a consortium benefits customers.

Discussion

Our theory and supportive findings challenge the widespread assumption that board ties among competitors harm customers' benefits by reducing market competition and enhancing their bargaining power through collusion. Based on a sample of 79 savings banks in South Korea, we examined the relationship between board ties among competitors and banks' participation in the PF consortium. We found that the higher the board ties with other savings banks, the more active the banks' involvement in the PF consortium, providing better financial opportunities to customers. This suggests that outside directors can not only play the role of monitoring the management but also serve as assistants to provide banks with reliable information, networks and advice critical for the formation and stability of risky PF consortia. Furthermore, the positive impact of board ties on bank participation in a PF consortium becomes more pronounced, especially when the proportion of external shareholders is small or when savings banks are family firms. Thus, our results imply that the role of outside directors is not simply fixed as a supervisor or an assistant but can vary within the continuum between supervision and assistance,

depending on the ratio of external shareholders and family ownership or control.

Contribution

This study provides several important contributions to the relevant literature. Firstly, we provide new theoretical insight and empirical evidence to the field of corporate governance by demonstrating that banks with higher interlocking directorates through outside directors participate more actively in partnership with rivals for the benefit of customers. In fact, the dominant idea among scholars is that board-friendship ties within the industry through outside directors are undesirable for customers. Scholars have long argued that board ties within an industry provide a potential mechanism by which top executives can coordinate firm decisions with competitors and consequently avoid competition (Baker & Faulkner, 1993; Burt, 1983; Mizruchi, 1996; Palmer et al., 1986; Salancik & Pfeffer, 1978). By suggesting that board ties via outside directors help firms create interfirm collusion by reducing competition in the industry, prior studies have emphasised the negative impacts of board-friendship ties among competing firms on corporate customers (Westphal et al., 2006; Westphal & Zhu, 2019). However, we refute the widespread perception on interlocking directorates by showing that board ties within the banking industry through outside directors can cause banks to provide more financial opportunities to their customers. Specifically, outside directors can provide banks with reliable information, advice and networks necessary for the stability and success of the PF consortium. Therefore, banks can jointly bear the risk with other banks in projects they would never have invested in if they had done it alone because of high risk and uncertainty.

Secondly, this study also contributes to the field of cooperation by suggesting that outside directors can not only play supervisory roles but can also play active roles as assistants in cooperation. While prior research emphasises the role of the outside director as a corporate supervisor for the legitimate management of collaboration (Klijn et al., 2019; Reuer et al., 2014), less attention had been paid to the role of assistant that an outside director can play for the effective formation of collaboration. Similarly, while existing studies have identified numerous factors for the creation of cooperation such as prior experience (Al-Laham et al., 2008), technological relatedness (Teo & Bhattacharjee, 2014), CEO's human network (Lee & Park, 2008) and institutional environment (Hitt et al., 2004), there exists little recognition that outside directors can be another important source for the formation of collaboration with rivals. This is because prior studies mainly perceive the role of outside directors as supervisors monitoring whether companies operate their businesses properly. However, we reveal that banks with a greater ratio of outside directors in the banking industry participate more actively in PF consortia, suggesting that outside directors can provide banks with valuable resources to realise risky partnerships with rivals. Thus, while previous research suggests that board ties are not created for strategic purposes (Palmer,

1983; see review by Mizruchi, 1996; Westphal et al., 2006), based on the empirical evidence that board interlock ties are rarely reconstituted after the accidental dissolution of such ties, this study clearly recognises board ties via outside directors as an intended outcome for the successful formation and stability of cooptation.

Thirdly, we provide a new mechanism by which external shareholders affect corporate governance by suggesting that the major roles of outside directors in the company can change as the proportion of external shareholders varies. Prior research has studied how external shareholders affect corporate governance by suggesting that external shareholders influence the board by appointing outside directors of their choice (Masulis & Mobbs, 2011; Short et al., 2002). This is based on the assumption that directors unconditionally monitor the management as desired by external shareholders. However, this study suggests that if the external shareholder ratio is not high, even outside directors can play the stronger role of an assistant in the company rather than a corporate supervisor. Therefore, we provide a more nuanced three-way interaction between external shareholder, outside director and corporate governance by suggesting that the primary roles of outside directors on the board may vary within the continuum between supervisors and assistants, depending on the proportion of external shareholders.

Finally, this study contributes to the family business literature by providing insight into how the unique characteristics of family firms in strategic choices make outside directors contribute as assistants than supervisors. While family business research well documents the unique characteristics of family firms, most studies focus on the consequences of such uniqueness on top executives and seek to elucidate the difference of executives' behaviours between family and nonfamily firms. Thus, few studies have focused on the potential differences in the role of outside directors between family and nonfamily firms. This study shows that the positive relationship between board ties via outside directors' and firms' participation in PF consortia becomes stronger in family firms. This suggests that, because of the family firms' unique strategic choice which selects top executives based on SEW more than actual managerial ability, the executives of family firms are more likely to appoint outside directors to compensate for their lack of competency, causing outside directors to play more active roles as assistants than supervisors. Thus, we contribute to the family business literature by explaining how the main role of outside directors in family firms can be different from that of outside directors in nonfamily firms because of the unique characteristics of family firms in strategic decisions.

Limitation and future research

This study has limitations, which also provide opportunities for future research. The first limitation of our study is that the sample is Korean companies. In South Korea, awareness of the need to improve corporate governance began to emerge

after the 2000s. Therefore, unlike United States or Europe, the outside director system has not been fully established among Korean companies. This suggests that the influence of the CEOs or major shareholders may be strong in the election of outside directors in Korea, and thus the role of the appointed outside director as a supervisor may be relatively weak. Therefore, in a future study, it would be theoretically worthwhile to empirically test the hypotheses of our study based on companies in countries where the outside director system was fully established earlier than Korea. For example, in countries where the outside director system has already been institutionalised, the role of outside directors as supervisors is more likely to be stronger than that in Korea, and as a result, the influence of board ties in an industry on customers as shown in this study may be different. Secondly, our sample consisted only of banks, so it did not include companies from various industries. Because banks receive money from depositors, they already face stricter regulations and monitoring by government and financial authorities than companies in other industries. As a result, the need for additional supervision through outside directors may not be strong in the banking industry, thereby making an environment in which outside directors easily play the role of corporate assistants on the board. Therefore, in order to generalise the implications of our study to more fields, it is necessary to empirically test our hypotheses in companies from various industries other than the banking industry.

Acknowledgements

Competing interests

The author(s) declare that they have no financial or personal relationship(s) that may have inappropriately influenced them in writing this article.

Authors' contributions

All authors contributed equally to this work.

Funding information

This research received no specific grant from any funding agency in the public, commercial or not-for-profit sectors.

Data availability

The data that support the findings of this study are available upon reasonable request from the corresponding author.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

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