

Article

Korean Business Groups and Performance of Group-Affiliated Professional Sport Teams: Focusing on the Asian Financial Crisis

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Abstract: This study examines the impact of Korean business groups, chaebols, on the sporting performance of their affiliated professional sports teams using game data from 1983 to 2013. We investigated whether or not chaebol ownership of professional sports teams is more efficient than non-chaebol ownership in achieving athletic success on the field of play. Our empirical evidence found that the chaebol-affiliated teams are more likely to be the league winners or finalists than non-chaebol teams are. We also tested the relationship between the financial crisis in the wider economy that deflates firm resources and athletic outcomes in the affiliated teams. In the tests, which divide the sample period into three 10-year periods, the results of two sub-samples (1983–1993 and 2004–2013) were in line with previous results. We, however, identified an exception when chaebol teams did not play in more final matches of a league between 1994 and 2003, the time interval that includes the period of drastic restructuring of business groups during the 1997 Asian financial crisis.

Keywords: sports team performance; chaebols; asian financial crisis

1. Introduction

The question of how and under what circumstance organizational performance can be boosted is classic, yet, important to the wide range of research agendas in business and management research [1–3]. From a sports organizational perspective, scholars and practitioners have continuously devoted great attention to this issue and strived to find various determinants that have positive impact on the performance of sports organization [1,4–8]. Some researchers attempt to identify the relationship between team members, suggesting that stability and longevity of team relationships [6], team cohesion [8], and tactic knowledge developed by shared team experience [1] are beneficial to sports performance.

Particularly, there is a different stream of research on this agenda, which focuses on the influence of a corporate system, in specific, corporate governance on the performance of professional sports teams [9–11]. Mainly based on the Western context, these studies shed light on the role of advanced governance factors in maximizing team efficiency. Their findings support that strategic capacity of board [9], board composition, induction and training of directors, information disclosure [11], audit committee, risk management, and financial planning [10] positively affect the club performance.

Although previous studies have examined the effectiveness of diversified ownership in a team, our understanding on the relationship between them and team performance remains limited, particularly in the context of Asian countries. In these countries, where professional sports are predominantly controlled by the large industrial corporations, such as business groups (e.g., chaebols), rather than by wealthy individuals or the general public as in Western countries [12–14], the game results of a sports team may be contingent not only on the team-level capacities, such as players, coaching staff, and fan royalty, but also on the firm-level resource endowment and the active resource sharing mechanism in its parent company.

In this study, we particularly focused on the role of the chaebol as a crucial resource provider for the affiliated professional sports teams [15–17]. Business groups are not limited in Korea but exist extensively, particularly in the emerging economies [15,18]. Khanna and Rivkin [19] explain that business groups play significantly important roles in the countries and regions, such as Latin America (grupos), Japan (keiretsu), Korea (chaebols), and India (business houses). These groups are generally run and owned by the particular families and function actively and widely in the country [19,20]. Chaebols substantially contribute to the wealth of Korean economy, with approximately 40 percent of the total output in Korea coming from the top 30 chaebols [15]. Notably, most of the business groups, including Korean chaebols, are in form of highly diversified organizational structure that facilitates the internalization of strategic resources and the resource sharing among the member organizations [15,21]. This peculiar internal mechanism offers the useful framework that allows us to explore its role in developing team performance, specifically in winning titles in professional sports competitions. Given the great influence of corporate ownership on professional sports leagues in Asia, examining the link between this type of corporate ownership and sports performance has the utmost importance.

Another important, yet difficult to neglect, issue is how financial crisis affects the performance of business group affiliated team. The Asian financial crisis that swept Korea in 1997 caused drastic socioeconomic changes, such as the restructuring of chaebols [22]. Joh [23] explains that poor corporate governance structure managed by Chaebols was one of the main reasons for the outbreak of the 1997 financial crisis in Korea. Finally, there was a series of bankruptcies and drastic reconstructing of business groups during the event [22,24]. Concurrently, their sports clubs were also affected by the significant level of restructuring, or even sold out to other firms [25]. Consequently, it is logical to draw that the game performance of the chaebol-affiliated clubs would be affected by the negative macro event. While the extant research generally tends to concentrate on the team-level financial distress and its relevant factors (i.e., player salary, weak governance) [26,27], the effect of financial crises has significantly downplayed the factor of athletic achievements in management arena.

To fill in these research gaps, using the hand-collected data of the game results from 1983 to 2013, the current study examines the impact of ownership by industrial corporations on the team performance. Specifically, using the case of Korean business group called as chaebol, we investigate (1) whether chaebol-affiliated teams achieve athletic outcomes that are superior to those owned by non-chaebols (i.e., non-affiliated firms, citizen) in the national championship leagues of four professional sports: baseball, football, basketball, and volleyball or not. We take a step further and investigate (2) whether or not the Asian financial crises affect the business group-affiliated sports organizations.

Extending from the prior studies on team performance, our study makes several contributions. First, this study contributes to the strand of literature on the corporate governance by improving our understanding of business groups as a critical determinant of team performance in professional sports. Although studies have examined the effectiveness of business groups on the financial performance of the group-affiliated firms [18,28,29], few research works have directly attempted to investigate their association with the team performance from the sports organizational perspective.

Consequently, few empirical findings have been found studying this relationship, despite of the sports teams affiliated with these firms pursuing heterogeneous organizational objectives [16,17], having low levels of organizational independency [13,16], and being of the predominant form of ownership, particularly in East Asian economies [12]. Addressing this research void, findings from this research will offer fresh insights into how special features of business groups, such as diversification,

affect the play of the teams on the field, a factor that has largely been neglected in the sports management literature.

Second, our level of analysis of the sponsorship from chaebols examines whether the performance of sports team in the game is in line with the previous business groups and chaebols studies or not by adopting the transaction cost approach and the resource-based view (RBV) as the theoretical lenses to capture the insights. A plurality of studies regarding business groups and chaebols have been conducted to examine the impact of their internalized resources and sharing among member organizations on firm performance [15,18,23]. Currently, it is difficult to directly examine the internal transactions and resources of the chaebol-affiliated team with the team performance since Korean clubs do not provide the annual reports in public. However, we can utilize the academic contributions from the numerous previous studies in business groups, and it is notable that the extant theory has not leaped far from the past notion that the talented players should be beneficial to the team performance [30,31] or that the manager capacity helps significantly in terms of enhancing the game results [5,6]. If the corporate ownership of sports team is crucial as a resource provider in the professional sports [32,33], different dimensions on the research approach should be applied in order to understand how the firm-level resources play in sport organizations, particularly in the context of business group. Exploring this relationship would help advancing the academic knowledge that has been heavily biased toward the relationship between the team-specific resources and team performance link, shedding new light on the effectiveness of firm-specific resources in sports teams.

Third, our research adds to the sparse literature on the effects of financial crisis in the wider economy on professional sports teams. Most prior theorizing and studies on the financial instability of sports teams have focused on the previous cases that make teams fall into insolvency [26,27], thus overlooking the impact of the economic slowdown on professional sports leagues. This issue is particularly important in the context of the corporate ownership in East Asia, given the strong financial link between parent companies and their affiliated sports teams [13]. Thus, by examining the 1997 Asian financial crisis that led many chaebols into bankruptcy, our study offers new insights to the influence of serious economic recessions on the game performance of the chaebol-affiliated sports clubs in Korea.

2. Theory and Hypotheses Development

2.1. Two Important Theoretical Grounds of Business Groups

2.1.1. Transaction Cost Approach

Coase's [34] seminal article, "The Nature of the Firm" and the analysis followed by Williamson [35] articulate that business groups have been deemed as one of the forms that firms take to save transaction costs [36]. When market imperfection exists, firms are likely to internalize strategic resources in order to overcome market failure and resulting high transaction costs [35]. Therefore, diversification can be the vital strategy that firms employ in order to save transaction costs by facilitating the internalization of critical resources and the co-sharing across the business group [37].

Chang and Hong [15] document two critical factors in relation to the development of chaebols in Korea. The first was the market imperfection caused by the Japanese occupation (1910–1945) and the Korean War (1950–1953). These two historical upheavals caused the significant instability of Korean economy due to the lack of suitable business infrastructures, including financial and human capital. Under these circumstances, in order to reduce the high transaction costs incurred by market imperfection, Korean firms pursued the internalization of strategic assets through active resource sharing [38,39]. Through the diversification and the economies of scale and scope, chaebols were able to resolve market imperfection and high transaction costs, enhancing the firm-wide performance [21]. Consequently, chaebol clubs may receive the internalized resources, such as good managers, coaches, and foreign players from their overseas offices and group-level talented staffs from the business group to which the teams belong.

2.1.2. Resource-Based View

In the resource-based view (RBV) on the firm, the primary objective of diversification is sharing strategic resources among businesses [40–43]; these shared strategic resources are the critical determinants of firm performance [42]. Markides and Williamson [44] argue that corporate diversification is explained as the device that facilitates resource sharing within the firm for acquiring competitive advantage and performance. Li and Wong [45] also point out that the diversified resources can be considered as the natural benefit stemming from business groups since they are not monolithic entities with aggregated resources, while the resources of the business groups are scattered in various business units that possess their own resources and competencies. Empirically, Hill, Hitt, and Hoskisson [46] confirm that the resource diffusion by sharing critical capabilities and skills between divisions enables the diversified firms to decrease the operating costs of the divisions and to charge the higher price for the products of their divisions due to better differentiation of the products. Chang and Hong [15] also report that Korean business groups create value to the group-affiliated organizations by pooling and allocating heterogeneous resources through diversification. The findings of Chang and Hong [15] provide a particular implication for this study, as they imply that the chaebol-affiliated sports teams may have benefits from the diversified and allocated resources of the owners as one of the member organizations [42,47].

Using the resource-utilization model of professional sports teams, Gerrard [32] tested whether the ownership status of professional soccer teams in the FA Premier League influences the organizational efficiency or not. The result exhibited the strong positive association between the listed team ownership and the financial performance of professional soccer teams; however, no significant evidence that listed teams demonstrate the differences in resource allocation or sporting performance over the non-listed teams could be found. While the research by Gerrard [32] empirically confirms the effects of ownership status on the club performance, it only concentrates the effectiveness of the stock market flotation of the firm to which the team belongs. The focus of our research is on the corporate ownership, specifically on the business groups, and its effect on the game performance using wider range of professional sports.

2.2. Chaebol and Performance of Affiliated Professional Sport Team

Prior studies suggest that the chaebol-affiliated business units build transferable competitive advantages by mobilizing the resources and experiences available from other group members, underpinning transaction cost approach and RBV [15,36,38]. The transfer of human resources among the affiliates is a typical way of facilitating the sharing of intangible resources, such as knowledge and skills, between these organizations [15,36]. Due to their high profiles, chaebols recruit the best college graduates and provide extensive managerial and technical training to their employees [15]. Thus, by using the affluent pool of talented personnel, chaebol-affiliated professional sports teams are more likely to, and in a more efficient way, acquire better quality of human capital for their operations than non-chaebol teams are as they do not need to contract them from the external markets. This benefit may play as an advantage for chaebol teams, as it is difficult for other teams owned by the independent companies or by the public to duplicate.

Chaebols distribute not only the human capital but also the financial resources within the group. Williamson [48] documented that business groups tend to establish an internal capital market by acquiring funds from some subsidiary companies and reallocating the funds to other companies. This phenomenon is also well-noted in chaebols. More specifically, they subsidize the preferred affiliates by using their intra capital market facilitated by the financial and retail sectors with high cash flow within the business group [15]. The existence of internal capital market indicates that chaebol owners are more likely to have a higher level of financing capability in order to provide subsidies for their sports teams than the other types of corporate ownership without such an internal financing market.

Indeed, subsidies from the owners of business groups are crucial in sustaining on-going operation of sports team in Korean professional leagues [16,17]. The majority of team revenue is derived from the sponsors who are either the headquarters or other affiliated companies in return for the marketing of

the company names, staple products, and brands on their team uniforms, advertisements in stadium, and merchandising. According to the annual audit reports of seven professional baseball teams registered in the Korea Baseball Organization (KBO), none of them stated profits in the 2013 season, exhibiting serious financial vulnerability of approximately 40 percent to 70 percent of total sales covered by the subsidies from the controlling corporations. Given their significantly low level of fiscal self-reliance ratio, the internal capital market may play the salient role by helping chaebol owners offer more secured financial resources for the popular sports teams than other types of owners may.

In addition, professional sports teams under the umbrella of chaebols unarguably spend more money on recruiting top athletic talents and coaches that drive more superior game performance of the sports teams. For example, while professional baseball franchises backed by the independent firms, such as Nexen and NC Soft, paid approximately 5.1 and 4 million dollars for the salaries of their players, those owned by large chaebols, such as Samsung, LG, and Lotte, allocated 20 percent to 50 percent more funds for their salaries, marking 7.5, 6.4, and 6.2 million dollars, respectively, in 2013 (1 US dollar = 1000 won). The statistics demonstrate that the chaebol-affiliated teams may enjoy better financial status than non-chaebol teams do due to the affluent subsidies from their owner groups. The aggressive investment propensity for the athletic resources may be associated with the superior performance of chaebol-affiliated professional sports teams on their plays on the field. By providing richer and more secured financial resources for the chaebol teams, the internal capital market should play as an imperfectly imitable and substitutable mechanism over the competitors [49].

Finally, the existence of brand power resources offers the chaebol-affiliated teams' distinctive advantage vis-à-vis the stand-alone teams [36]. Generally, chaebols concentrate on their whole group image more deeply than the individual image of each affiliated organization. Thus, this group-wide marketing allows affiliated organizations to utilize the group-level brand power, identity, and reputation of their own business operation [15]. Chaebol-affiliated sports teams may also have similar advantages, when using this shared reputational resource. For instance, utilizing the brand power and reputation of the group, chaebol sports teams are more likely to attract competent players and managerial personnel than non-chaebol teams.

The multiple channels to acquire the critical human, financial, and reputational resources may be one of the most crucial factors in chaebol-affiliated teams gaining sustainable competitive advantage [42,49–51]. The benefits from these shared resources may help chaebol-affiliated teams to achieve better performance in professional sports games than non-chaebol teams, just as other member firms tend to outperform the independent corporations in some emerging economies [18,19,21,52]. Regarding the chaebol's clubs, Sung et al. [14] report that the chaebol-affiliated firms enjoy positive spill-over effect onto the success of their affiliated team success to be in the postseasons by using the Korean Baseball Organization (KBO) data from 2001 to 2013. Therefore, we hypothesize:

Hypothesis 1a. *Chaebol teams are more likely to be league winners than non-chaebol teams.*

Hypothesis 1b. *Chaebol teams are more likely to be league finalists than non-chaebol teams.*

2.3. Chaebol-Affiliated Sports Team and Financial Crisis

A research area closely related to the issue discussed above is that of the relationship between professional sports teams and financial crisis. Chaebol-affiliated professional teams are able to acquire the competitive advantage by accessing strategic resources due to the ability of their owners to internalize market failure [53]. However, this phenomenon may not be effective when their owner firm falls into deep economic recession since it may cause the firm to go through serious financial instability as their customers spend less, lenders lend less, and competitive rivalry increases [27]. Economic downturns threaten the survival of all firms, with significantly declining assets available to the firms. Under this period of extremely reduced environmental munificence, the unique ability of chaebols to create and share heterogeneous resources among the members is more likely to be deteriorated due to

the internal and external resource paucity. Therefore, the game performance in the affiliated sports teams may suffer under severe economic recession.

In general, the originating nature of the professional sports has been analyzed in the literature from two main perspectives: whether the ownership pursues profit maximization or seeks playing success, even though it is inconsistent with financial profitability [54,55]. However, the *raison d'être* of the chaebol sports teams is not to maximize profit or win. It is to bring positive effect on the value and group-wide solidarity of the owner firms through boosting corporate image, reputation, and sales of its products as marketing tools [13,16,17]. For instance, winning the national championship by the chaebols-affiliated teams almost certainly leads to the large-scale marketing events in order to promote the sales of their products. Team identity as a marketing/promotion method indicates that chaebols may be quick to cut or stop funding for the affiliated professional teams during the period of recession since the investment for the areas that are not directly related to their core business may be considered unnecessary expenses that need to be curtailed. In addition, their organizational objective, which develops the value and business of the owner group, proves that the business of chaebol teams is greatly dependent upon the economic success of owners [13]. In this regard, the economic crisis inducing financial vulnerability of the chaebol firms is likely to yield significantly negative impact on the group-affiliated professional sports teams.

The 1997 Asian economic crisis clearly portrays the detrimental effects of the global recession on the group-affiliated professional sports teams. The financial catastrophe caused the fatal impact on every aspect of Korean economy, particularly on chaebols [56]. The public and the government blamed their reckless management and corporate governance failure as the primary cause of the economic disaster [23,57,58]. During the crisis, over half of the top 30 chaebols went into bankruptcies or bank-sponsored restructuring programs called 'public fund' [22,59]. In order to reform their poor corporate governance systems, the Korean government has forced drastic chaebol restructuring [23]. Thus, it is not surprising that the unstable financial status of chaebols during the economic turmoil greatly influenced the operation and performance of the affiliated professional sports teams. According to the major domestic newspaper, *Dong-A ilbo* [25], the crisis first made chaebol groups carry out large scale restructuring of their professional sports clubs in order to downsize their operations or help them to survive by themselves without subsidies from the parent companies. In an attempt to finance operating funds, most chaebol teams sold their star players to professional sports clubs in other countries, and some teams were even dissolved due to the difficult financial situations and insolvency of owner firms. This anecdotal evidence clearly demonstrates that economic downturns may negatively impact the performance of professional sports teams. Based on the discussion above, we propose that:

Hypothesis 2a. *The possibility for chaebol teams to be league winners was likely to be decreased during the 1997 Asian financial crisis.*

Hypothesis 2b. *The possibility for chaebol teams to be league finalists was likely to be decreased during the 1997 Asian financial crisis.*

3. Methods

3.1. Data and Sample

Contrary to the other studies which have used single sports research sample [6,14,26,27], we analyzed four major professional sports leagues which chaebols deeply participated in to identify the chaebol effects on professional sports teams in Korea, as using only single sports league, such as the baseball league, is prone to sample selection bias problem.

We collected the sporting results generated by 62 professional sports teams registered in four professional sports leagues from the year when each sport was introduced to 2013: baseball (only male sample; 1982–2013), football (only male sample; 1983–2013), basketball (male and female sample;

1997–2013), and volleyball (male and female sample; 2005–2013). We obtained all of the data from the official web sites of each individual team and, also, professional sports associations including the Korea Baseball Organization (KBO), the Korean Basketball League (KBL), the Women's Korean Basketball League (WKBL), the Korea Football League (K-League), and the Korea Volleyball League (V-League).

3.2. Measures

3.2.1. Athletic Performance

Bloom [60] explains that two primary types of organizational goals are pursued by the owners of professional sports clubs as the following: On-field performance and financial performance. In this study, we focus on the on-field rather than the financial achievement in professional sports organizations for two reasons. First, sporting results of professional sports team are more readily available from various sources including Korean professional sports organizations and media than the financial data of relevant firms, given the fact that most professional sports teams in Korea, except several large franchises, do not provide the annual reports to the public. Second, we adopt the belief of Berman et al. [1] on the competitive advantage in sports organizations, arguing that winning is the fundamental factor in sports; thus, if one sports organization wins more than it loses for the long period, it would be viewed as outperforming and would, therefore, have the competitive advantage [1].

In order to analyze and compare the athletic performance between chaebol teams and non-chaebol teams, our study subdivided their game results into two different levels of achievement: league winners (labeled as WINNER) and league finalists (labeled as FINALISTS). In determining the game performance of each team, we identified the ranking of each team, when the team finished each season, and posited that the higher position a team gets in a league, the higher performance it achieves. Moreover, in an attempt to examine the performance of chaebol teams more comprehensively, we included not only the winner of each league but also the league finalists as measures of the club performance. For this research, we excluded semi-finalists because only seven teams participated in the V-League, where more than half of the teams are automatically up on the semi-finals. We also excluded the cup winners since, generally, most of the cup matches are the international competitions, such as the Baseball World Cup, the Asian Cup Volleyball Championship, and the Asian Cup for football.

3.2.2. Chaebols

Our independent variable was the chaebol (labeled as CHAEBOLS), which is a dummy variable. Since the aim of this research was to investigate whether professional sports teams under chaebol ownership outperform those controlled by non-chaebol sports teams or not, it was essential to determine which sports teams are classified as the chaebol teams and the non-chaebol teams. To address this issue, we adopted the definition of the Korean Fair Trade Commission (KFTC), which specifies chaebols as being firms where “more than 30 percent of shares are owned by controlling shareholders and their affiliated companies.” Therefore, we obtained the list of chaebols from the Korea Fair Trade Commission (KFTC) and confirmed whether the sports organization was affiliated with the firm in the chaebol list.

3.2.3. Control Variables

Except for a few professional sports teams, Korean professional sports teams do not provide their annual reports to the public. Therefore, we collected a few variables through the web sites of the teams that may affect the game performance of the teams following previous studies. In order to take these into account, we included five control variables in our model: the age of a team (labeled TEAMAGE), the number of players (labeled PLAYERS), the turnover of a coach (labeled COACH), year dummies (labeled as YEAR), and sports dummies (labeled as SPORTS).

Team age is measured by the number of years since the team has been legally formed. It is generally assumed that the sports team with a longer athletic experience and operation possesses

more accumulated strategic assets, particularly intangible resources such as tactic knowledge [1] and team cohesion [8]. Stinchcombe [61] proposes that the lack of certain crucial capabilities and positional advantages of the younger organizations makes them vulnerable. On the other hand, as organizations age, they learn from the experience and improve their capabilities, especially when the environment remains stable [62]. Improvement in capabilities enhances performance and lowers the hazard of failure. In this regard, team age should be the factor that influences the performance of sports teams; thus, we consider this effect in our study.

The number of players is taken as the logarithm of the number of players which have been registered in each professional club in every season. A larger number of players do not directly represent better athletic capability. However, it may indicate that the team possesses a wider range of choices in terms of utilizing players' talents. Thus, if a team has a larger group of players, managers are more likely to have better options in terms of utilizing their athletic resources in accordance with the specific game situations. In this respect, we control the number of players as the influential factor for the level of game performance for the team.

The turnover of coach was also controlled. Montanari, Silvestri, and Gallo [6] states that a coach plays a vital role in relation to the team performance since he/she is responsible for the critical decisions concerning the management of players (e.g., recruitment, training, skills development) and the overall team management (e.g., play strategy, analysis of games). In the same vein, team owners often change coaches who are responsible for the poor performance in order to maximize sporting performance. We measured the coach turnover as a dummy variable. When the name of the coach at the end of previous year differs from that at the end of current year, we identify that the coach turnover has occurred during the current year.

Lastly, we use dummy variables for each sport (labeled as SPORTS) in order to account for the heterogenous nature of the sports. The rationale behind this is two-fold. First, sports with higher number of teams are less likely to be ranked as finalists. For instance, there are eight baseball teams and ten men's basketball teams in each league for the year 2012. The likelihood for a men's basketball team to become finalists is lower than that for a baseball team as the former has more teams to win. Second, the CHAEBOL variable may be positively correlated with the game sports for certain sport types. The probability for chaebol-affiliated teams to become finalists is higher for sports with higher proportion of chaebol-owned teams.

3.3. Estimation Method

This analysis used the panel data including 62 teams in four professional sports (baseball, basketball, football, and volleyball) for the 30-year period of seasons from 1983 through 2013. In order to measure hypotheses, we use the generalized estimating equations (GEE) model since it incorporates the within-group correlation structure [63]. A typical correlation structure imposed in the model is the exchangeable structure. Call R a working correlation matrix for modeling the within-group correlation. Thus, $R(t,s)$ denotes the correlation of t and s elements within the group. The exchangeable correlation structure is defined as

$$R_{t,s} = 1(\text{if, } t = s), = a(\text{otherwise}) \quad (1)$$

where $0 < a < 1$. When those assumptions are met in the panel-model, we can get more efficient inference and more valid hypothesis tests.

4. Results

Table 1 demonstrates the descriptive statistics of variables and the correlation matrix. The highest value of the variance inflation factors is 4.97, thus, it is less than five. We conclude that multicollinearity is not a serious problem in this model.

Table 1. Correlation matrix and descriptive statistics.

	1	2	3	4	5	6
WINNER (1)	1.000					
FINALISTS(2)	0.648	1.000				
CHAEBOLS (3)	0.094	0.107	1.000			
TEAMAGE (4)	−0.023	−0.014	0.038	1.000		
PLAYERS (5)	−0.077	−0.101	0.011	−0.303	1.000	
COACH (6)	−0.033	−0.052	0.010	−0.013	0.112	1.000
Mean	0.129	0.251	0.742	14.778	28.809	0.323
SD	0.012	0.016	0.016	0.447	0.391	0.017

Table 2 represents the results of league winners and league finalists in the sample. We have set two main hypotheses. For Hypothesis 1a (panel A), which posits chaebol teams are more likely to be the league winners than non-chaebol teams, the significance level in the GEE estimation is at 1 percent ($p < 0.01$), supporting Hypothesis 1a. In the same vein, Hypothesis 1b (panel B) predicts that chaebol teams are more likely to be the league finalists than non-chaebol teams. The result of Hypothesis 1b also shows statistically positive significance with a 1 percent significance level ($p < 0.01$). To summarize, the results of the analysis show that chaebol teams attain higher game performance than non-chaebol teams, as we expected.

Table 2. Factors affecting club performance.

	Panel A. Dependent Variable: WINNER			Panel B. Dependent Variable: FINALISTS		
	Coefficient	SE	<i>p</i> -Values	Coefficient	SE	<i>p</i> -Values
CONSTANT	2.015	2.069	0.330	3.709	1.632	0.023
CHAEBOLS	1.150	0.440	0.009	0.894	0.310	0.004
TEAMAGE	−0.023	0.013	0.087	−0.026	0.010	0.013
PLAYERS	−1.386	0.603	0.027	−1.572	0.477	0.001
COACH	−0.090	0.241	0.707	−0.132	0.188	0.482
No. of Groups	62			62		
Obs.	765			765		

Note: SPORTS and YEAR dummies are included in the empirical specifications, but corresponding coefficients are not reported in this table.

To examine Hypotheses 2a and 2b, we additionally divide the whole sample period of this research from 1983 to 2013 into three 10-year periods: 1983–1993, 1994–2003, and 2004–2013. The Asian financial crisis happened in 1997–1998. Thus, approximately three years before and after the event, the 1994–2003 period reflects our Hypotheses 2a and 2b.

Table 3 indicates the results of analysis from the years from 1983 to 1993. It is seen that the GEE estimation is positively associated in two dependable variables. League winners (panel C) are statistically significant. League finalists (panel D) are also statistically supported at 5 percent significance level ($p < 0.05$). The results show that professional teams under chaebol ownership have strong tendency to achieve a higher performance than the teams under non-chaebol ownership during the period from 1983 to 1993. However, the test results for the sample period from 1994 to 2003 exhibit dramatically different trends of the chaebol ownership on game performance to those examined in previous hypotheses.

Table 4 demonstrates that the period between 1994 and 2003, that includes the onset and the effective period of the 1997 Asian financial crisis demonstrates that league winner (panel E) and finalists (panel F) are statistically insignificant. Therefore, the positive effect of chaebol ownership on the team performance is not observed, as shown in panel E and F. The results portray that there was no chaebol effect on Korean professional team sports during the fatal period of the Korean economy crisis.

Table 3. Factors affecting club performance during 1983–1993.

	Panel C. Dependent Variable: WINNER			Panel D. Dependent Variable: FINALISTS		
	Coefficient	SE	<i>p</i> -Values	Coefficient	SE	<i>p</i> -Values
CONSTANT	12.459	3.392	0.002	10.190	3.553	0.004
CHAEBOLS	1.150	0.629	0.008	1.021	0.503	0.042
TEAMAGE	0.172	0.062	0.006	0.062	0.052	0.234
PLAYERS	−5.036	1.335	0.000	−3.670	1.168	0.002
COACH	0.118	0.551	0.830	0.054	0.428	0.899
No. of Groups	19			19		
Obs.	147			147		

Note: SPORTS dummies are included in the empirical specifications, but corresponding coefficients are not reported in this table.

Table 4. Factors affecting club performance during 1994–2003.

	Panel E. Dependent Variable: WINNER			Panel F. Dependent Variable: FINALISTS		
	Coefficient	SE	<i>p</i> -Values	Coefficient	SE	<i>p</i> -Values
CONSTANT	−0.447	5.339	0.993	2.528	3.936	0.521
CHAEBOLS	0.101	0.755	0.893	0.164	0.496	0.741
TEAMAGE	0.005	0.038	0.893	0.008	0.025	0.751
PLAYERS	−0.554	1.545	0.720	−1.133	1.144	0.322
COACH	0.058	0.433	0.893	−0.268	0.346	0.439
No. of Groups	37			37		
Obs.	226			226		

Note: SPORTS dummies are included in the empirical specifications, but corresponding coefficients are not reported in this table.

The relationship between chaebols and their affiliated professional sports teams is distinctively altered once again for the measure of data from 2004 to 2013, demonstrating statistically positive impact of chaebols, as shown in Table 5 (panel G, H). Therefore, hypotheses 2a and 2b are statistically supported. Our results highlight that the chaebol effect has not only consistently existed in the Korean professional sports market, but also significantly influenced the level of athletic achievement in sports organizations during the third decade.

Table 5. Factors affecting club performance during 2004–2013.

	Panel G. Dependent Variable: WINNER			Panel H. Dependent Variable: FINALISTS		
	Coefficient	SE	<i>p</i> -Values	Coefficient	SE	<i>p</i> -Values
CONSTANT	4.182	4.009	0.297	5.340	3.125	0.087
CHAEBOLS	1.631	0.622	0.009	1.374	0.531	0.010
TEAMAGE	−0.038	0.019	0.050	−0.024	0.016	0.141
PLAYERS	−1.985	1.129	0.079	−2.143	0.880	0.015
COACH	−0.250	0.350	0.476	−0.068	0.257	0.793
No. of Groups	48			48		
Obs.	392			392		

Note: SPORTS dummies are included in the empirical specifications, but corresponding coefficients are not reported in this table.

To obtain the statistical inference, we provide the cross-equality test of coefficients between two sample periods: first decade and third decade. The null hypothesis of interest is given by

$$H_0 : B_{chaebol,j}^{first} = B_{chaebol,j}^{third} \quad (2)$$

where j denotes the type of performance (WINNER, FINALISTS), and $first$ and $third$ indicates the first decade and the third decade samples, respectively. Table 6 shows that two chaebols coefficients estimated on two different samples are not statistically different since all p -values are greater than 0.05.

Therefore, in the context of Korea, the chaebol effect on the affiliated professional sports teams has been consistently shown in the first (1983–1993) and third decades (2004–2013). The chaebol effect was not seen during the second decade (1993–2003), wherein the Asian financial crisis took place.

Table 6. Cross-equality test of coefficients.

	WINNER	FINALISTS
<i>t</i> -value	−0.137	−0.484
<i>p</i> -value	0.891	0.629

5. Discussion and Conclusions

5.1. Discussion

Despite the large volume of studies on the relationship between a business group and its affiliated companies, the issue of whether and how business groups affect organizational performance in its affiliated sports teams has been a neglected area of research in extant literature. In order to explore this ignored, yet important, topic, (1) our study examined how chaebols are associated with the sporting performance of their professional sports teams. (2) We also tested for the effects of chaebol ownership on the organizational performance in professional sports during the Asian financial crisis. Using the panel data that measures game results of the national championship leagues from 1983 to 2013, our research empirically confirms that chaebol-affiliated professional teams significantly outperformed non-chaebol teams at sports competitions for most of our sample periods.

However, the positive relationship between chaebols and athletic success on the playing fields was an exception in the results for the period from 1993 to 2003 that includes the 1997 Asian financial crisis that struck the Korean economy. During this devastating time of economic recession, the professional sports teams affiliated with chaebols failed to be ranked above the finalists in the national championship leagues, showing no statistically significant association with winning a game. This finding indicates that economic recession and the resulting financial distress in the owner corporations significantly affect the game performance of sports teams in Korea. The economic aggravation that Korea suffered in the late 1990s caused the drastic business retrenchment of chaebols [22–24]. Most chaebol-affiliated professional sports teams were seriously impacted by the vulnerable economic situation of the owner firms; thus, they were given significantly reduced funding from the group or were, at worst, even disbanded.

Our results strongly suggest that the chaebol ownership plays the important determinant of team performance in Korean professional sports. Through providing their natural benefits of diversified resources and active resource sharing [15,45], chaebols are able to help the affiliated sports teams acquire critical knowledge, capacity, and resources more affluently and efficiently than non-chaebols with no or lower level of diversification and internalization of resources. Consequently, these salient assets derived from the group-level resources may allow the sports teams to boost up their athletic success more than non-chaebol teams. Our findings also imply that professional sports franchises controlled by the business groups are more likely to achieve superior game outcomes than those owned by the non-business groups in other countries with institutional context that is similar to that in Korea.

Our paper makes a number of contributions to the field of corporate governance. The findings derived from our research improve our understanding of an important, yet underdeveloped type of sports ownership, namely the business group, in determining organizational performance in professional sports teams. More specifically, our research sheds new light on chaebols as the professional sports team owner and elucidates how this type of ownership (such as internalizing and transferring vital resources within the firm) impacts the athletic success of their affiliated sports organizations.

Furthermore, our research contributes to better understanding of the effects of economic recessions and downturns on sports. This aspect is particularly important in the institutional context where sports

teams are principally controlled by chaebols, as is the situation in Korea. By investigating how financial crisis is serially correlated with chaebol affiliated sports teams, this paper not only enriches previous studies that have mainly concentrated on the previous cases of team-level financial crisis but also those that have largely overlooked the consequences of the financial crisis in the wider economy.

Lastly, our study adds to the literature on the sports ownership that has largely focused on the cases of Western countries by suggesting the effectiveness of corporate ownership in professional sports in East Asian countries where professional sports teams are characterized by significantly low levels of self-reliance and marketing/promotion identity.

This research also provides some implications for practitioners and scholars. Our findings offer empirical evidence that chaebol teams outperform non-chaebol teams in sports competitions. Therefore, non-chaebol team managers should recognize that chaebol ownership positively affects the performance of affiliated team and should, thus, strive to develop their own competitive capabilities in order to respond to the benefits derived from the chaebol ownership. It also confirms the significant association between business groups and performance of sports teams in the context of Korea. Thus, the results may offer an important implication for scholars and sports managers in other countries where sports ownership by business groups is prevalent.

Our research has some limitations. Our paper does not consider team-wide management style and decision-making processes, which may affect team performance itself, as well as the ways in which they deal with the risks and obstacles associated with team performance. We examine chaebol status itself without utilizing intra-group resources sharing, internal business transactions, and VRIN (value, rare, inimitability, and non-substitutability) characteristics related variables due to the limitation of obtaining their annual reports. Therefore, researchers may try to examine variables specific to the chaebol teams in the future research using various methods, such as survey, in order to find the impact of chaebol clubs on team performance.

In this study, chaebols are regarded as one type of business groups. Even if business groups are prevalent in numerous emerging countries [15], their specific characteristics may vary from country to country [64,65]. In this respect, our results may be limited to Korea. In order to generalize these findings, further studies considering the samples of other countries using the comparative method are necessary.

Despite the prevalence of business groups running many sport organizations, the relationship between group-affiliated teams and their performance is significantly ignored in the literature, particularly those based on the quantitative analysis. Thus, in future study, scholars need to pay more attention to business groups as the critical determinant of performance of the sports teams and carry out more empirical studies in order to find their various effects on sports organizations.

5.2. Conclusions

Using the panel data with extensive information of four major Korea professional sports, we offer empirical results on the effectiveness of chaebols regarding their game performance of the affiliated sports team. Drawing on the transaction cost approach and the RBV, we specifically compared the game performance between chaebol-affiliated teams and non-chaebol teams. Our empirical findings confirm that professional sports teams under the chaebol ownership have enjoyed the positive effects of owners on playing successfully, as they are more likely being league winner and finalists than those owned by non-chaebol owners. We also verify that the positive effect of chaebols continues during the two sub-sample periods (1983–1993 and 2003–2013). However, the positive relationship is not in line with the test results for the other sub-sample period between 1993 and 2003, which includes the 1997 Asian financial crisis.

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