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Economics of the Football Industry: Performance (Expectations), Fan Demand, and Managerial Turnover

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LIST OF ABBREVIATIONS

CB	Competitive Balance
CBR	Competitive Balance Ratio
CEO	Chief Executive Officer
CI	Competitive Intensity
DCB	Distance to Competitive Balance
DFB	Deutscher Fußball-Bund (German Soccer Federation)
DFL	Deutsche Fußball-Liga (German Football League)
DP	Designated Players
EC	Eastern Conference
FIFA	Fédération Internationale de Football Associations (International Federation of Association Football)
HHI	Herfindahl-Hirschmann Index
HHI*	Normalized Herfindahl-Hirschmann Index
ICCI	Intra-Championship Competitive Intensity
IMCI	Intra-Match Competitive Intensity
LLC	Limited Liability Company
MLB	Major League Baseball
MLS	Major League Soccer

NASCAR	National Association for Stock Car Auto Racing
NASL	North American Soccer League
NBA	National Basketball Association
NFL	National Football League
NHL	National Hockey League
OLS	Ordinary Least Squares
RSD	Relative Standard Deviation
RSD*	Normalized Relative Standard Deviation
UoO	Uncertainty of Outcome
SMSA	Standard Metropolitan Statistical Area
SUR	Seemingly Unrelated Regression
UEFA	Union of European Football Associations
WC	Western Conference

1 INTRODUCTION

Sport at the amateur and professional level plays a crucial role for many people, both athletes and spectators. At the professional level, the sport has evolved from being an amateur pastime of particular public interest to a significant industry (Downward et al., 2009). Especially the demand and supply of professional team sports worldwide has increased considerably in the last few decades. Among the North American pro sports leagues, the example of the professional football[1] league Major League Soccer (MLS) most clearly illustrates the increased demand and supply of pro team sports. After the precursor to MLS, the North American Soccer League (NASL), folded in 1984, MLS launched a new attempt to establish a professional football league in North America. The foundation of MLS was a condition for the United States to host the 1994 World Cup, and the league began its competition in 1996 to benefit from the continued interest in football following the World Cup tournament (Bradbury, 2021; Strutner et al., 2014).

After MLS struggled in their first years of existence, the league has succeeded in establishing itself as a stable and vital pro sports league. The league, to illustrate this point, has experienced a 27 percent rise in interest from 2012 to 2018 (Nielsen, 2018), a steady increase in television ratings from 2010 to 2014 (Sung et al., 2019), and a 55 percent increase in average attendance from 2000 to 2019. According to recent estimates by *Forbes Magazine*, the average MLS team in 2019 is worth 313 million dollars, and its year-over-year growth of 30 percent substantially surpasses the increasing team values in the "big" North American sports leagues.[2] Professional sports leagues in Europe have also experienced remarkable growth. For instance, the revenue

[1] In this thesis, "football" refers to association football (also known as soccer, e.g., in North America).

[2] The year-over-year growth amounts to 13 percent for the National Basketball Association (NBA), eleven percent for the National Football League (NFL), and six percent for Major League Baseball (MLB) as well as the National Hockey League (NHL) (Smith, 2019).

generated by the 18 football clubs in the German Bundesliga reached in the 2018-19 season an all-time high of 4.02 billion euros and the 15th consecutive year of record revenue (DFL, 2020).

The (economic) growth of professional sports leagues has provided a strong impetus for economists who have become increasingly interested in professional team sports, both theoretically and empirically. Studying professional team sports is particularly appealing for two reasons. First, the peculiarities of professional team sports markets constitute interesting cases to study. These are first presented in the seminal articles by Rottenberg (1956) and Neale (1964), who provided foundation work for subsequent academic investigations on the economics of professional team sports. In his pioneering article, Rottenberg (1956) states that a unique attribute of professional sports markets is that "competitors must be of approximately equal 'size' if any are to be successful" (p. 242). Therefore, following his "uncertainty of outcome hypothesis", fan demand is greater in games between teams of comparable strength. Closely related to the uncertainty of outcome hypothesis is the concept of competitive balance. While uncertainty of outcome represents one of the desired properties provided by professional team sports leagues, "it necessarily follows that the financial well-being of a professional sports league is enhanced by a relative equality across teams in their degree of competitiveness" (Kringstad & Gerrard, 2007, p. 151). Consequently, competitive balance is essential for maintaining the financial viability of pro sports leagues. Later, Neale (1964) stresses that the professional team sports industry differentiates from other industries, insofar as a monopoly position in the market is neither profitable nor a desirable goal because of the joint production of the final good. Thus, there is a need for cooperation between teams to produce individual games and a league competition (Neale, 1964). Concerning the idiosyncrasies of professional sports markets, Kahane and Shmanske (2012) point out that „professional team sports have created a specific organizational structure that is both highly successful and unique in the field of economic organization" (p. 3).

Second, professional team sports constitute an interesting field of research because of its comprehensive and accurate data on the characteristics and performance of individuals working in an industry (Kahn, 2000). Furthermore, Kahn (2000) emphasizes that "professional sports leagues have experienced major changes in labor market rules and structure […] creating interesting natural experiments that offer opportunities for analysis" (p. 75). Therefore, professional sports leagues provide an ideal laboratory for investigating various economic issues (Kahn, 2000; Scully, 1974; Szymanski, 2003).

In recent decades, the examination of labor market issues in professional sports and sports economics research, in general, has increasingly gained attention from academics and has evolved into a well-established field of economics (Downward et al., 2019). Within the area of sports economics, the football industry is among the most researched fields (for an overview of research topics in this sub-field, see Weimar, 2019). Apart from its economic growth, the football industry is particularly interesting to study for several reasons. However, primarily because of its worldwide popularity, public availability of detailed and frequent data, and existing analogies to business and economics (compare Pieper et al., 2014).

The seminal articles by Sloane (1969, 1971) provided the starting point for economic investigations on professional football. From then on, research on football-related topics has increased substantially. While Rottenberg (1956) and Neale (1964) assume profit-maximizing behavior in (North American) team sports markets, Sloane (1971) argues that the assumption of profit maximization behavior was inappropriate for the football industry. Instead, he states that a utility maximization model in terms of playing success measured by win percentages, profits, average attendance, and health of the league is better suited to explain underlying behavior in this industry (Sloane, 1971).

When evaluating the presence of utility- (mostly win maximization subject to a budget constraint) or profit-maximizing behavior in the football industry, differentiating between franchises in North America and clubs in Europe is important. Researchers have a broad consensus that organizations in North American sports leagues (e.g., football franchises) attempt to maximize profits. However, it is intensively discussed in the literature whether European football clubs behave in a profit or win maximizing way (e.g., Garcia-del-Barrio & Szymanski, 2009).

The distinction between pro sports leagues in North America and Europe rests on existing differences in their organization. In North America, professional team sports leagues are organized as closed leagues, in which new franchises can participate in the competition by granting exclusive territories. In contrast, European leagues usually operate under an open league structure with a promotion and relegation system. Moreover, North American sports leagues differentiate from those in Europe in further aspects. For example, some leagues (e.g., MLS) have introduced a regulatory framework (including roster limits, salary caps, or player drafts) designed to ensure a league with financially viable and evenly balanced teams. Also, several differences exist between franchises in North America and clubs in Europe at the team level. For instance, in contrast to European football clubs, the possibility of stock market flotation is absent for most franchises in North America due to restrictions creating entry barriers for outside investors. Thus, the organizational set-up of the league and binding (legal) requirements in the competitive environment of franchises or clubs heavily influence their scope for sporting and financial decisions. Moreover, the organizational structure can produce specific incentives for individuals working in the organization. Against this background, considering the differences in the organization of leagues – and its teams – is fundamental for economic decision-making and affects, as Noll (2003) emphasizes, “the demand for a sport […] and the

extent of competition among teams for fans and for their most important inputs, players, coaches, and stadiums" (p. 531).

This thesis addresses the abovementioned aspects and encompasses four research papers, covering topics of interest from the economic view of sports or, more precisely, from the economic view of professional football. The topics reach from an analysis of competitive balance levels and their expectations (chapter 2) to the effects of (un-)expected match results on stock performance (chapter 3), as well as to analyzes of the determinants of fan demand (chapter 4) and managerial turnover (chapter 5). Also, the research in this dissertation provides insights into other fields outside the area of sports. For instance, analyzing the level of competitive balance and its ex-ante expectation is related to economic contests (e.g., in labor markets) and betting market efficiency. Testing the effects of match outcomes on stock return relates to information efficiency in financial markets and investor sentiment. The analysis of the determinants of ticket demand refers to the entertainment industry and represents consumer preferences under uncertainty. Moreover, examining the determinants of (in-)voluntary coach turnovers resembles managerial replacements within organizations.

The studies in this thesis focus on two exceptional cases. At the league level, Major League Soccer is the subject of three empirical investigations in this dissertation. At the club level, Borussia Dortmund is the subject of further empirical analysis. Both cases are worthwhile to study from an economic perspective, mainly because of their distinctive organizational form within the football industry. Also, from an academic perspective, both cases are of interest as they are not extensively studied in the literature and provide "insider econometric" case studies[3].

[3] In the last decades, economists have increasingly gained data from firms to study whether human resource management practices increase productivity. Early studies using this insider econometric approach primarily addressed human resource issues, such as the effect of incentive pay on productivity (e.g., Ichniowski et al., 1997; Lazaer, 2000). However, the approach can also be applied to other contexts (e.g., Januszewski Forbes & Lederman, 2009; Kalnins & Chung, 2006).

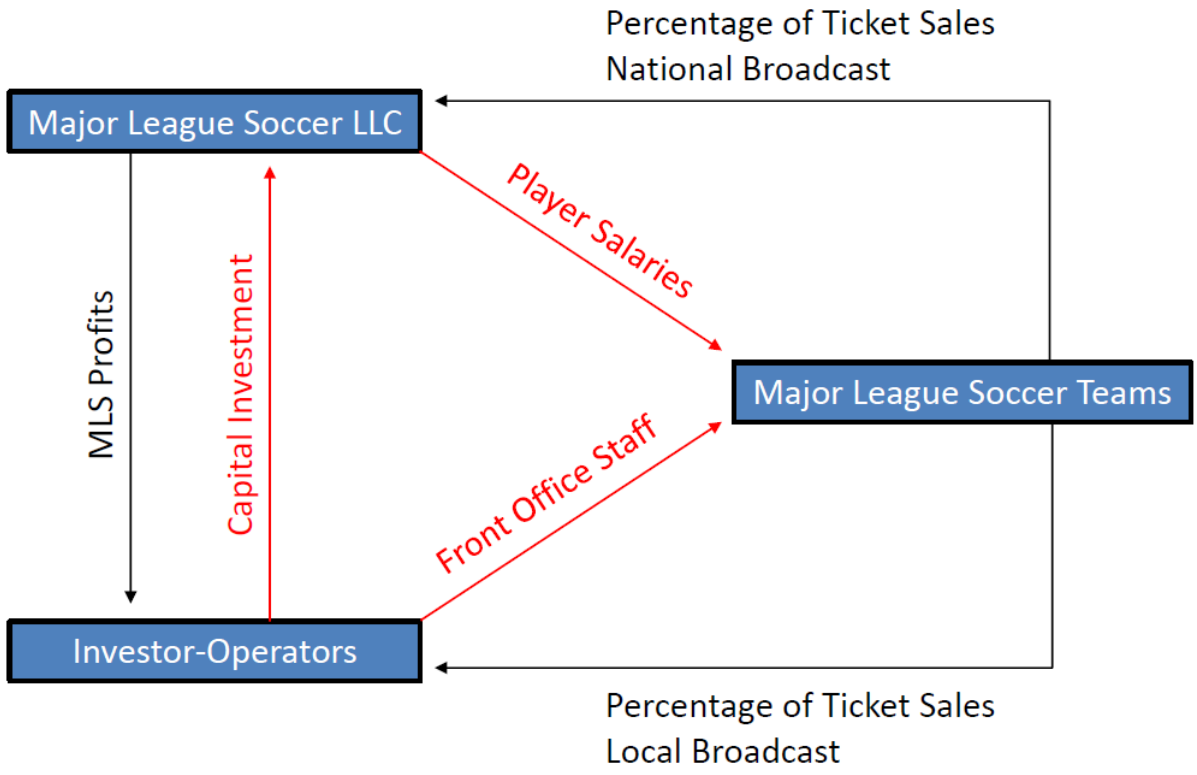
These studies often determine cases where several organizational practices enhance overall performance (e.g., the tight regulatory framework in MLS). Also, these studies typically use organizational-level data with accurate econometric hypotheses to test the influence of organization-specific determinants on productivity (Bartel et al., 2004; Ichniowski & Shaw, 2003). Thus, this thesis's case studies contribute to the already existing literature by providing knowledge concerning relevant sports economics issues for two specific types of organizations.

On a general level, the research in this dissertation can be embedded into the context of Organizational (Learning) Theory and Organizational Behavior. According to Slack and Parent (2006), Organizational Theory "is concerned with the structure and design of organizations […,] seek to identify commonly occurring patterns and regularities in organizations, and understand their causes and consequences" (p. 6). On the contrary, Organizational Behavior "focuses on individuals and small groups within the organization, and the characteristics of the environment in which they work" (Slack & Parent, 2006, p. 8). The studies in this thesis cover both perspectives, thus providing a better understanding of the peculiarities of the unusual organizational forms within the football industry. The following sections present the idiosyncratic organizational "architectures" of the two cases studied.

In contrast to MLS's predecessor, the NASL, and other professional football leagues worldwide, MLS operates as a single-entity limited liability company (LLC). In this organizational form, all teams are possessed by the league and separately managed by MLS's investor-operators. Therefore, each team in the league has an investor-operator that owns a financial stake in MLS, depending on their initial investment, and has significant management control over its affiliated team. Also, the operators and the league share team revenues and expenses. In line with the goal of profit maximization, both the league and the investor-operators have clear responsibilities. Generally, incentives are aligned so that investor-operators concentrate on establishing their teams locally, while MLS supports the league nationally (Krasny, 2017). For example, while

investor-operators are responsible for hiring non-player personnel (e.g., office staff, coaches), the league is responsible for contracting players and paying their salaries. Consequently, investor-operators manage a high proportion of local revenue (e.g., stemming from ticket sales or licensing local broadcast rights) and are the residual claimant for this share of local revenue (Bradbury, 2021). Figure 1 provides an overview of the allocation of revenues and expenses between the LLC, investor-operators, and teams in MLS.

Figure 1. The Distribution of Revenues and Expenses in Major League Soccer



Note. This figure presents examples of revenues (black arrows) and expenses (red arrows). Own representation.

Concerning MLS's league structure, Bradbury (2021) points out that while it provides the "advantage of skirting antitrust rules and keeping labor costs down, sharing of revenue from a common pool has the potential to disincentivize investor-operators from investing resources to promote winning and league quality" (p. 7). From this perspective, MLS might suffer from a lower competition between teams and a decreased quality of play resulting in a decline of

demand as fans substitute MLS by attending and/or broadcasting domestic or foreign pro sports leagues. Thus, MLS's single-entity structure emphasizes the importance of property rights directed to revenue streams that are positively linked with performance. However, as long as this is the case, investor-operators are incentivized to invest in performance to promote league quality (Bradbury, 2021).

At the club level, the organizational form of Borussia Dortmund represents another interesting case. The legal form of Borussia Dortmund GmbH & Co. KGaA – a hybrid form of a stock company (AG) and a limited partnership (KG) – varies from that of traditional stock companies in the football industry. Figure 2 displays the structures and responsibilities between the e.V. (registered association), the KGaA (limited partner with a share capital), and the GmbH (limited liability company).

Figure 2. The Organizational Structure of Borussia Dortmund GmbH & Co. KGaA

Note. From "Annual Report 2019/2020", by Borussia Dortmund GmbH & Co. KGaA. Copyright 2020 by Borussia Dortmund.

In this legal form, the e.V. is the owner of the GmbH, which acts as a general partner of the KGaA. An advantage of this legal form is that the company can generate more capital through the stock market exchange than the legal form of an AG. Also, Wilkesmann and Blutner (2002) emphasize that the club's organizational structure "allows for a loosely coupled decision-making connection between the e.V. and the joint stock company, but […] ensures a degree of continuity over decision making" (p. 33). While the managing boards' members of the club, KGaA, and GmbH are mostly identical, the structure enables quick and efficient decisions. However, the members' participation is more symbolic as they cannot perform control through the supervisory board concerning personnel or essential management decisions (Wilkesmann & Blutner, 2002). Thus, a lack of managerial control and diluted property rights represent known legal form deficiencies that might negatively affect organizational performance.

In summary, the research in this thesis addresses the peculiarities of the two organizational forms outlined above and considers their influence on performance (expectations), fan demand, and managerial decisions. The following sections present the studies in this dissertation and provide concrete research questions for each.

In chapter 2, the first manuscript of this thesis contributes to the literature on competitive balance by analyzing the evenness between the teams in MLS with different statistical measurements. While previous studies mainly concentrate on investigating competitive balance in European football leagues, MLS is not intensely studied and represents an interesting case due to its unusual league structure and specific policies (e.g., designated player rule). Also, MLS is worth investigating as competitive balance represents a key concept for the league that is expected to increase fan demand, attract investors, and promote steady growth with financially viable teams (MLS, 2017).

Based on a compiled dataset including all MLS results from 1996 until 2016, this study examines the development of competitive balance in MLS over time and compares the level of competitive balance with those of top European football leagues. According to Kringstad and Gerrard (2007), competitive balance represents a "multidimensional concept requiring multiple metrics to capture its different dimensions" (p. 155) and encompasses the ex-post distribution of actual game outcomes and the ex-ante probability distribution of game outcomes. Therefore, differentiating between the different dimensions and understanding the effects of competitive balance on economic success, attendance figures, or on revenues of leagues is crucial for the management of leagues (Pawlowski & Budzinski, 2013). Compared to previous studies, this work also uses ex-ante information from betting odds to examine (potential) differences between the ex-ante and ex-post measured competitive balance in MLS. Thus, chapter 2 aims to answer the following research questions:

(i) *What is the level of competitive balance in Major League Soccer, and how did it develop over time compared to top European football leagues? Is there a difference between the ex-post and ex-ante measured competitive balance in Major League Soccer?*

While the first manuscript of this thesis focuses on studying differences in performance levels and their expectations at the league level, the manuscript in chapter 3 turns to the club level and analyzes the impact of team performance and its expectations on the share price. As mentioned earlier, in contrast to most franchises in North American sports leagues, European football clubs can gain capital through stock market flotation. Among football clubs in Germany, Borussia Dortmund constitutes an outstanding example because the club is the only first division club that went to the stock market and selling shares. Thus, advantages of being the first-mover (e.g., enjoy a comparatively large market share) might be in place. However, this first-mover advantage might not have fully materialized due to its hybrid legal form.

This study addresses the club's first-mover strategy and analyzes the nature of stock price reactions of Borussia Dortmund following domestic league and international matches between 2000 and 2018. According to the efficient market hypothesis, market participants immediately respond to new information (e.g., the result of a particular match) and integrate it into their respective club's revaluation if they consider that information meaningful. While market expectations (proxied by the betting odds) should include all the information that influences the match outcome, it can be assumed that investors should react to match outcomes only in the case of unexpected results. However, the football industry is specific due to the particular characteristics of investors concerning club loyalty (Zuber et al., 2005). From this perspective, the behavior and strategies of investors acting in the football industry might be different from those observed in other industries. Thus, chapter 3 highlights the following research question:

(ii) How do (un-)expected match results of Borussia Dortmund affect the club's stock return?

Returning to the case of MLS, the study in chapter 4 investigates the determinants of game-level stadium attendance over the period 2006 to 2019. More specifically, this work examines franchise expansion and location's effect on MLS's regular-season attendance rates. Generally, new teams are expected to increase the interest of sports fans, and each team's revenue and profitability are dependent on the drawing potential of the local market (El-Hodiri & Quirk, 1971; Fort & Quirk, 1995). Therefore, issues of fan substitution and local (agglomeration) effects gaining particular emphasis in this study. Consequently, in a profit-maximizing single-entity league like MLS with no promotion and relegation system, strategic placement of new teams is crucial for the entire organization's economic performance. The manuscript in chapter 4 provides answers to the following research question:

(iii) Does franchise expansion and location affect game attendance in Major League Soccer?

The study in chapter 5 examines the determinants of (in-)voluntary head coach turnovers using a dataset including regular season and playoff games in MLS from 2004 to 2019. Similar to the role of top managers in business organizations, coaches of professional sports teams are responsible for motivating their employees, more precisely their athletes, to total effort to maximize team production (Alchian & Demsetz, 1972). Despite the difficulty for decision-makers to disentangle the coach's leadership contribution to the team's performance, coaches are formally responsible for the overall performance. Thus, if the team performs lousy-compared to prior expectations-, coaches might be under the threat of dismissal. In contrast, if the team performs well -or better than expected-, the coach signals to possess relevant capabilities and is in great demand. Hence, the coach is expected to receive more job offers and might be more likely to quit the team voluntarily due to better outside options or other (personal) reasons.

Using data from MLS to study managerial replacements is worthwhile for two reasons. First, MLS's idiosyncratic competition and ownership structure imply specific incentives for coaches in the league that might affect coach duration and its determinants. For example, coaches might be interested in leaving their team in MLS mid-season to begin a new coaching job in Europe, ideally before the preparation time for the upcoming season. From this perspective, comparing the results to those presented in the existing literature on coach separations in European football is particularly interesting and provides knowledge about (potential) similarities and differences. Second, this study contributes to the literature by gaining insights into the determinants and timing of managerial turnovers in a professional football league operating under a playoff system. Chapter 5 addresses the following research question:

(iv) What are the determinants of (in-)voluntary head coach turnovers in Major League Soccer?

Table 1 provides an overview of each manuscript and its submission status in academic journals.

Table 1. List of Research Papers as Parts of this Dissertation

Research Paper and Author(s)	**Chapter in the Dissertation**	**Submitted to**	**Status**
Expectation versus Reality: An Analysis of Ex-Ante and Ex-Post Competitive Balance in Major League Soccer from 1996 – 2016 *(with Franziska Prockl)*	2	International Journal of Sport Management and Marketing	Second Round of Review
The Effects of (Un-)Expected Match Outcomes on Stock Return: A Case Study of Borussia Dortmund *(with Bernd Frick)*	3	International Journal of Sport Finance	Forthcoming
Where to Go Next? Examining the Effect of Franchise Expansion and Location on Game-Level Attendance in Major League Soccer *(with Bernd Frick, Rob Simmons, and Hojun Sung)*	4	Journal of Sports Economics	Second Round of Review
Time to Say Goodbye: A Duration Analysis of the Determinants of Coach Dismissals and Quits in Major League Soccer *(Single-Author Paper)*	5	Journal of Sports Economics	Published (online)

6 CONCLUSION AND OUTLOOK

This thesis provides economic analyzes of two organizations operating under an unusual organizational form within the football industry. By presenting four comprehensive empirical studies on performance (expectations), fan demand, and managerial turnover, this dissertation delivers important contributions to the management of leagues and clubs, investors, (local) policymakers, and academics interested in the subsequent research questions:

(i) What is the level of competitive balance in Major League Soccer, and how did it develop over time compared to top European football leagues? Is there a difference between the ex-post and ex-ante measured competitive balance in Major League Soccer?

(ii) How do (un-)expected match results of Borussia Dortmund affect the club's stock return?

(iii) Does franchise expansion and location affect game attendance in Major League Soccer?

(iv) What are the determinants of (in-)voluntary head coach turnovers in Major League Soccer?

The study in chapter 2 provides answers to the first-mentioned research questions (i). Concerning the level of competitive balance in MLS, the results of the ex-post measures show that the league is evenly balanced across seasons. Also, apart from the French first division, MLS is more balanced than other top European football leagues. Moreover, the ex-post results indicate that MLS has become more balanced over time, whereas the top European football leagues have tended to become less balanced.

In contrast, the results from the ex-ante analysis do not confirm the finding of an increasing balanced league. Conversely, the ex-ante results suggest a rising imbalance of MLS with clear favorites and reduced uncertainty of outcome. The differing findings for ex-ante and ex-post competitive balance align with earlier studies in professional team sports (e.g., Schmidt & Berri, 2001) and provide important implications for league management and sports economics

research. While MLS's regulatory framework and the strategic placement of teams contributed to achieving an evenly balanced competition, some competition-related decisions made by MLS might have transferred a contrasting image to the market. If the league is not perceived as attractive by fans, media or investors, MLS might be threatening to lose public interest. Consequently, league revenues will be decreasing and can jeopardize MLS's growth. Therefore, MLS faces the challenge of better communicating their intentions for competition-related changes to influence markets' expectations of the league positively. This study contributes to the existing literature primarily in two ways. First, it investigates competitive balance in MLS over a long and recent period and compares it to top European football leagues operating under an open league system. Second, this work provides evidence of a differing impact of competition-related changes on ex-ante and ex-post competitive balance in MLS. Accordingly, academics should be aware of the multidimensional nature of competitive balance when investigating the evenness between the teams in a league.

Providing an analysis of performance and its expectations at the club level, the study in chapter 3 sheds light on the second research question (ii) by investigating the impact of (un-)expected match results on stock return for the case of Borussia Dortmund. This work contributes to the strand of studies in this field by providing compelling evidence for one of the most successful European-listed football clubs over a long time. Hence, this study is less likely to suffer from unobserved heterogeneity in comparison to many previous studies. The results indicate that abnormal returns vary with the match result, the match venue, the competition type, prior expectations of bookmakers, and the importance of the Bundesliga match. According to (un-)expected match outcomes, the results do not confirm the assumption that expected match outcomes would influence abnormal returns to a lesser extent than unexpected match outcomes.

While the results mainly confirm the findings of previous studies, they are surprising insofar as the hybrid legal form of the club (Borussia Dortmund GmbH & Co. KGaA) differentiate

distinctly from that of traditional stock companies in the football industry. The general assumption in economics that the separation of ownership and control decreases companies' performance while competition improves helps explain the findings above. Hence, two opposing effects influence organizational performance. On the one hand, the specific characteristics of the organizational "architecture" of Borussia Dortmund (e.g., the company's structure, policies, and procedures) that are in place to maximize the total effort of its members are likely to influence the club's performance negatively. On the other hand, the competition allows share- and stakeholders to benchmark an organization's management frequently, which might foster an efficient organization of production. Thus, competition sharpens managerial incentives by enabling owners and investors to compare managers' performance within the same industry. Consequently, the results of this work demonstrate that competition in the (managerial) labor market makes up for underlying deficits in the organizational form and do not negatively affect the club's performance.

Investigating the case of MLS, the study in chapter 4 provides answers to the third research question (iii) by examining the determinants of fan demand, primarily focusing on franchise expansion and location effects. Above all, the results from the empirical analysis show that a well-considered placement of MLS franchises is crucial to boost game-level stadium attendance. Thus, while going to cities with a large population and already hosting nearby NFL or NBA teams is positively associated with game attendance, the presence of nearby MLB and NHL teams reduces attendance rates. These fan substitution and sporting agglomeration effects vary by distance from the location of an MLS team, notably for placement of MLB and NHL teams. Apart from investigating several (potential) determinants of game attendance, this study also contributes to the literature by presenting simulation analysis results of current and candidate cities for MLS expansion. The results from the simulation analysis support some expansion decisions made by MLS (e.g., Charlotte, Miami) and offer suggestions for suitable candidate

cities (e.g., Indianapolis, Detroit) based on the attendance demand considerations. While the characteristics of the metropolitan market possess the potential to determine the success or failure of expansion teams, MLS officials can use the information provided to support future expansion decisions.

Lastly, the study in chapter 5 addresses the fourth research question (iv) by investigating the determinants of head coach dismissals and quits in MLS. In line with previous studies on European football leagues (e.g., Bryson et al., 2020; Van Ours & Van Tuijl, 2016), the study's results demonstrate that dismissals and quits are distinct forms of coach separations. More specifically, the results show that team performance related to expected playoff qualification and performance expectations are major determinants for both types of coach turnovers. Furthermore, the results provide evidence that the coach's reputation decreases dismissal probabilities, while coach age increases the probability of voluntarily quitting the franchise. The study's findings are relevant to business management in and outside the sports industry. The results demonstrate that accurate and frequent measures of performance expectations matter for (in-)voluntary turnover decisions in professional football. From this perspective, less frequent information on managerial performance and expectations could have greater importance for managerial replacement decisions in more diverse (business) industries.

As pointed out in the preceding summary, each study in this thesis provides valuable insights for understanding economic decision-making and performance(-related) outcomes in two different organizations, characterized by an atypical organizational form within its industry. Also, the cases in this thesis highlight the role of organizations acting as monopolists in their particular markets. In line with the statement by Neale (1964), both organizations need cooperation between teams to produce a viable (league) competition. However, the two organizations profit from a particular monopoly position. While Borussia Dortmund is the only German first division football club that turned to the capital market, the club is a "first-mover

[that] is, by definition, a monopolist, and may use this position to gain higher profits than would be possible in a competitive marketplace" (Kerin, Varadarajan, & Peterson, 1992, p. 34). Similarly, MLS benefits from a monopoly position. Even though the league faces domestic competition from major pro sports leagues, MLS's single-entity structure results in a monopolized market, i.e., for professional football in the United States. Consequently, the monopoly position enables MLS to decide about broadcast rights and collect more broadcast money than a decentralized sale of broadcast rights (Kesenne, 2015). Against this background, Kesenne (2015) points out that MLS's single-entity status "has nothing but undesirable consequences" (p. 817), especially for players and fans, and results in welfare losses and lower social welfare.

Furthermore, the case of MLS emphasizes the importance of organizational learning for future performance. While earlier studies show that learning from experience is relevant for organizations' actions (e.g., Cyert & March, 1963; Levinthal & March, 1993), more recent studies find that organizations vicariously learn from the (near-)failures of others (e.g., Kim & Miner, 2007). For MLS, Francis and Zheng (2010) provide evidence that the league "is actively engaged in a variety of strategic activities intending to avoid the replication of NASL failure" (p. 565). For instance, the authors stress that MLS's centralized leadership "attempts to limit the destructive behavior that was displayed by individual owners during NASL's over-expansion period and subsequent decline" (Francis & Zheng, 2010, p. 553). The findings of this thesis cannot confirm the evidence presented for survival-enhancing learning of MLS. However, they demonstrate that the league's sound (expansion) decisions achieved to increase attendance rates and revenues, indicating that MLS seemed to have learned from its defunct predecessor.

This thesis analyzes two exceptional cases using hitherto unused or untapped data with rigorous econometric modeling and hypotheses testing. The findings of the empirical analyzes have

wide-ranging implications for different share- and stakeholders of organizations in and outside the football industry. For example, investors can use the evidence presented to broaden their understanding of organizational forms that have contributed to building up a competitive advantage for the respective organizations, thus offering promising perspectives for investment. Concerning the case of MLS, the single-entity structure with its closed league system provides a stable (economic) environment for franchises that is attractive for investors given the threat of performance-based relegation is absent (Strutner et al., 2014). Also, investors might be interested in investing in Borussia Dortmund. Apart from its first-mover status, the club is of interest to investors as they can frequently benchmark its management within the same industry. Consequently, the underlying pressures of competition and the presence of publicly visible performance expectations and outcomes might overcome structural deficits in the club's organizational form and eventually lead to organizational efficiency.

Notwithstanding the four studies' valuable contributions to academia and practitioners engaged in the football industry, the research presented in this dissertation suffers from some limitations. Above all, one might question the generalizability of the findings due to the case-study character of the examined studies. The peculiarities of the professional team sports industry, especially the football industry, provide a particular environment for organizations that also affect organizational behavior. Also, given the idiosyncratic nature of the organizational forms studied, simply generalizing the results to other settings and industries is challenging. Thus, it can be argued that the research in this thesis has the main drawback as "insider econometric" (case) studies and only provides evidence for specific cases and industries. However, that shortcoming "is weighed against the greater confidence one has in the accuracy [and internal validity] of the econometric results" (Ichniowski & Shaw, 2003, p. 156).

A second limitation is that the empirical methodologies used in the studies do not allow to make causal statements of the results. As an illustration, the analysis of the determinants of attendance

demand (chapter 3) with ordinary least squares regressions can only identify factors associated with game-level stadium attendance but fail to estimate causal relationships. Ideally, randomized control trials should be applied to estimate the causal impact of different organizational practices on performance outcomes. However, implementing field experiments in professional team sports is practically impossible due to the underlying problem of creating control and treatment groups (for difficulties of performing field experiments in firms, see Bandiera et al., 2011). For example, competition-related changes in pro sports leagues, such as new or revised rules and regulations, typically affect all-league teams equally at the same time. Thus, it is challenging to identify randomly selected control groups for whom no change in organizational practices was introduced.

The limitations above lead to potential avenues for future academic investigations that have been outlined at greater length in the respective studies of this thesis. Notably, some avenues are worth investigating. Future studies could assemble a wide range of data from different organizational forms in the football or, on a broader level, in the professional team sports industry to provide innovative contributions to the available research. These data would help provide more general results concerning the role of organizational forms in explaining relevant issues in sports economics research. Moreover, future studies could add to the existing literature by identifying cases in professional team sports where organizational practices are implemented solely for a specific group (e.g., for one conference). In this case, the results from suitable econometric analyzes (e.g., difference-in-differences approach) would shed light on the causal relationships between organization-level practices and organizations' performance in the professional team sports industry.

In conclusion, the research presented in this thesis highlights the role of two atypical organizations within the football industry in explaining performance (expectations), fan demand, and managerial turnover decisions. On the one hand, this dissertation provides

empirical evidence of organizations that proved to be successful in increasing organizational performance and managing to overcome underlying deficits in the architecture of their particular organizational form. On the other hand, the findings of this thesis demonstrate that markets' expectations decisively influence managerial decisions and performance. Thus, aside from the choice of the organizational form, particular emphasis should be placed on the relevance of market expectations for the entire organizations' economic performance.

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