HAVING COMPETITIVE BALANCE OR NOT: A CRITICAL ISSUE FOR CHINESE BASKETBALL ASSOCIATION

by

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(Under the Direction of James J. Zhang)

ABSTRACT

With the continuous development of the global sports industry, scholars are increasingly focusing on the study of competitive balance. However, research on competitive balance, particularly regarding the Chinese professional sports leagues, is still in its early stages. This study is exploratory qualitative research that adopts a constraint theory to explore the necessity and constraints of competitive balance in the Chinese Basketball Association (CBA). Data collected through interviews were analyzed using grounded theory, revealing three core categories: internal influence, external influence, and core concept. The study establishes a model of factors influencing competitive balance, highlighting the integral role of competitive balance in the development of the CBA. This study provides practical guidance for maintaining or enhancing competitive balance in the CBA, enabling Chinese professional sports organizations to utilize the guidance to enhance the quality of game products and services in the future.

INDEX WORDS: Basketball; CBA; Chinese Basketball Association; Competitive Balance; Constraint Theory; Grounded Theory; Professional Sports; Uncertainty of Outcome

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DEDICATION

To Lanxiang Sun, my mom, and Zuozhong Li, my dad, I express my heartfelt gratitude for your unwavering support. Without you, I would not have had the confidence to continuously explore the possibilities in my life.

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CHAPTER 1

INTRODUCTION

In the contemporary era, the worldwide sports industry's economic value continues to thrive. The Business Research Company (2022) has projected that by 2026, the compound annual growth rate of the global sports industry will escalate by 9%, and the sports market value is poised to reach $707.84 billion. This progression has catalyzed a surge in spectator attendance, social media engagement, sponsorships, advertising, and revenues from television broadcast rights of sports events. For example, the National Football League commands broadcast deals worth over $6 billion annually (Statista.com, 2016). A vital ingredient to sustain such a substantial sports market is the competitive dynamics among clubs within the league. Each league's managers strive to strike a balance between fostering competition and providing opportunities for clubs to perform better than their adversaries.

The notion of competitive balance, which emerged from economics, was first applied in the realm of sports by Rottenberg in 1956. This concept has been variously construed, encompassing talent distribution, teams' fighting power, equitable opportunities for winning, and the distribution of performance ability (Daniel et al., 2021; Owen et al., 2007; Rottenberg, 1956; Szymanski, 2001; Zimbalist, 2002). The capacity to generate interest in the game through unpredictable outcomes and the dependence of clubs on spectator attention for commercial opportunities are captured by the concept of competitive balance (El-Hodiri & Quirk, 1971; Rottenberg, 1956). The expansion of the number of fans attending games or watching them on television is likely to be impeded by the absence of competitive balance, and the league would run the risk of losing viewership as a result. "The most significant challenge in the coming years

is competitive balance," remarked UEFA President Aleksander Ceferin during his European Club Association (ECA) general assembly in Geneva (Inside World Football, 2017, para. 3).

The concept of competitive balance has been extensively studied and is widely acknowledged as a crucial element of the global sports industry. However, there is significant variation in the application of this concept across regions. Notably, North America and Europe represent the most prominent regions in the global sports industry, as evidenced by the National Football League (NFL), Major League Baseball (MLB), National Basketball Association (NBA), and National Hockey League (NHL) in North America and the English Premier League, La Liga (Spanish Football League), Serie A (Italian Football League), and League 1 (French/Monaco Football League) in Europe, all ranking among the top ten most valuable sports leagues in the world (Dusan Randjelovic, 2020). Despite their success, these regions approach competitive balance from different perspectives.

The variation in the approaches to competitive balance between North America and Europe can be attributed to their distinct sports systems. North American sports leagues are predominantly "closed," while European sports leagues are primarily "open" with promotion and relegation. The latter means that the worst-performing team at the end of the season will be relegated to a lower division, while the best-performing teams in the lower division are promoted to the upper division. This system fosters victory maximization, which is associated with open leagues without a safety net, as clubs invest heavily to ensure their teams remain in the higher division. In contrast, closed leagues, which prioritize profit returns, are more stable, and it is easier for clubs and team owners to determine revenues and expenses to a certain extent. Additionally, the differences in league systems are associated with distinct operational goals, with professional sports clubs operating on a spectrum from profit maximization to victory maximization. These differences in goals are reflected in significant variations in spending

between clubs in European leagues, with only a handful of clubs winning most of the past titles in the Europa League.

Furthermore, American sports leagues have established many legal exemptions related to anti-trust laws, which allow them to implement competitive balancing rules, such as salary caps, to limit club spending and provide all teams with a chance to win league titles. In contrast, EU law prohibits many such measures, making it challenging for bodies like UEFA to enforce financial fair play. The difference in league ownership also affects the goals that teams pursue, whether profit maximization or victory maximization. North American sports leagues are purely private structures where the owners of the club/franchise are also the owners of the league and have significant power to protect their investments. In contrast, clubs in European leagues are only members of the league they belong to and have no ownership of the league, although this is changing, with all 20 teams in the EPL involving the league.

In recent years, the Asian professional sports league market has been a focus of global attention due to the region's significant economic growth and large population (Guillaume & Nicolas, 2010). Particularly, Chinese professional sports have emerged as a formidable player in the market. The State Council projects that China's sports and fitness market will generate RMB 5 trillion ($815 billion) annually in sustainable national income by 2025 (Upton, 2019). Despite the pandemic, China's sports market has experienced growth with the gradual resumption of major sports leagues such as the Chinese Basketball Association (CBA), Chinese Super League (CSL), China Volleyball League (CVL), and China Table Tennis Club Super League (CTTSL) (Qian, 2021). Furthermore, the Chinese eSports market was valued at RMB 165 billion in 2020, making it one of the largest eSports markets globally (Tencent, 2020).

Chinese professional sports leagues are in the early stages of professionalization and industrialization in comparison to well-established Western countries (Han, 2018). The Chinese

government has been making significant efforts to develop an elite sports system since the late 1970s (Fan et al., 2010). Since 1992, China's sports industry policies have been gradually clarified and explored in practice, and in 1995, the Development Guidelines for the Sports Industry highlighted the need for the formulation and improvement of economic policies within the industry (Zhan, 2013). Consequently, several professional sports leagues such as the Chinese Super League (CSL) and the Chinese Basketball Association (CBA) were established. The 2008 Beijing Olympics marked a turning point in the Chinese sports industry, with a greater emphasis on mass fitness and commercialization in addition to elite sports (Fan et al., 2010). Chinese professional sports leagues have since garnered significant attention, with the CSL's average attendance increasing from 11,000 in 2004 to 24,000 in 2016 (Zhang, 2020). Some of the top clubs, like Guangzhou Evergrande Taobao, have an average attendance of over 40,000 per game, positioning them among the top soccer clubs in the world in terms of attendance.

As scholars are increasingly recognizing the benefits of implementing the competitive balance concept from Western sports leagues into Chinese professional sports league management, a growing number of studies have emerged on this topic (He, 2005; Huang, 2007; Yang et al., 2008; Yin et al., 2009; He et al., 2009; Yan & Yang, 2016; Zhang, 2004; Zhang et al., 2008). However, a majority of these studies have merely replicated Western scholars' quantitative analysis methods without examining the Chinese context. While a few scholars have attempted to conduct empirical studies to provide more comprehensive analyses (Yan & Yang, 2016; Fu & Xiao, 2021), their results mostly indicate a significant competitive imbalance among teams in Chinese professional sports leagues. For example, Guangdong Hongyuan won 11 championships from the 2001-2002 season to the 2021-2022 season in the CBA (Sina Sports, 2020). Nevertheless, more fundamental questions, such as which areas lack competitive balance, how to address the imbalance, and how to allocate athletic talent, remain largely unexplored.

This study seeks to investigate how the Chinese Basketball Association (CBA) understands and implements competitive balance and address the issues that arise due to a lack of competitive balance to enhance the quality of its gaming products and services. In order to achieve these objectives, the study conducts a thorough review of existing literature and applies constraint theory as a theoretical framework. The study begins by establishing a theoretical foundation to provide a comprehensive understanding of the research topic.

Theoretical Framework

Constraint Theory

Before introducing the constraints theory, it is important to understand what the term "constraints" means in different academic contexts. We will briefly introduce the definition of constraint in the fields of business management, economics, and leisure sports studies, and describe how this study will use the theory. In business management, the term constraint is frequently described as a factor or factors, which may limit an organization’s performance in relation to its goal (Cox & Goldratt, 1986). Furthermore, the term constraint is often use in the economic theory as an umbrella term that for boundaries, obstacles, tendencies, and situations (Hawkins, 2003). Finally, a constraint in the field of leisure sports is described as a factor that limits or hinders an individual from participating in and enjoying a leisure activity (Jackson, 2000).

Through a review of the literature on the application of constraint theory in sports, we found that the theory is mainly applied to sports consumption behavior, which is the above-mentioned leisure sports field. Leisure constraint theory is more focused on the analysis of individual sports participants' constraints, and there is a lack of analysis of sports organizations with constraints theory (Gibson, 2005; Hinch et al., 2005; Koronios et al., 2020). Nowadays, the commercialization of sports organizations has gradually reached a new level. According to

Coakley (2004), the influence of economic factors on the meaning, purpose, decision-making and organization of sport is reaching unprecedented levels. Among the many sports organizations, closed-leagues tend to have profit maximization as their goal, with both league managers and club owners looking to make more profit (Anreff, 2011).

The connection between the competitive balance theory and the constraint theory lies in their shared focus on optimizing performance and creating a balanced environment, albeit in different contexts. The competitive balance theory emphasizes the importance of achieving a level playing field in sports by reducing disparities between teams or clubs. This involves implementing regulations to ensure equal opportunities, such as revenue sharing, salary caps, and drafts. On the other hand, the constraint theory is a management philosophy that addresses constraints or bottlenecks that limit system performance. It aims to identify and alleviate these constraints to optimize overall performance and throughput. When we consider the application of constraint theory to the realm of sports, it can be seen as a mean to achieve competitive balance. Constraints in sports can manifest in various forms, such as financial limitations or talent disparities. By applying constraint theory principles, sports organizations can identify and manage these constraints, thereby enhancing competitive balance.

In this case, the mindset of business management has a strong reference for the management of sports organizations. The subject of this paper, CBA, as a typical representative of closed professional sports league in China, is facing the problem of losing fans and sponsors (Liu et al., 2017). To improve the attractiveness of the CBA, this study will refer to the philosophy of constraint theory in business management as the basis of a theoretical framework to carry out the study and identify the constraints that limit the CBA's ability to achieve competitive balance. According to Goladratt's (1990, p. 5) description "any system, in reality, must have at least one constraint", this study considers CBA as a system with profit

maximization as its goal, and therefore there is at least one constraint that limits CBA to achieve its goal.

Competitive Balance Theory

Competitive balance plays a crucial role in professional sports leagues' development. Fort and Fizel (2004) claim that "Nothing is more important to pro leagues than competitive balance." One of the justifications given by league bodies for enacting limitations in the team sports labor market, such as revenue sharing and distinct procedures governing player transfers between teams, is the preservation of competitive balance. The concept of "competitive balance" in professional sports leagues is derived from the "competitive equilibrium theory" in economics, which was introduced by French economist Walras in 1874. Rottenberg (1956,) noted that "competitors must be of approximately equal "size" if any are to be successful" (p. 242). This view is widely considered the origin of the original explanation of competitive balance in sports. Another critical scholar is Walter Neale (1964), who, in the article titled 'The Peculiar Economics of Professional Sports,' presented the Louis-Schmelling paradox, which demonstrates the importance of competitive balance and equality of playing strength. There are other scholars whose relevant studies have also played an essential role in establishing the theoretical framework of this paper (e.g., Noll, 2003; Szymanski, 2000, 2003; Kesenne, 2007).

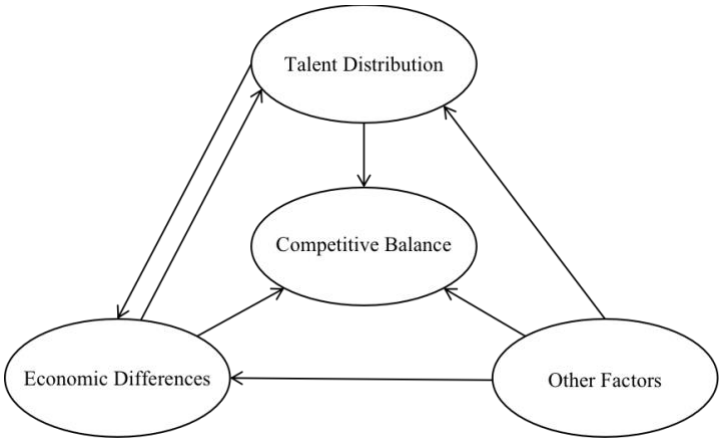
Although more and more scholars have started to study competitive balance, until now there is still no universal and precise definition to describe it. One of the reasons for this problem may be the complexity of competitive balance, as Zimbalist (2003a, p. 161) states, "I believe that competitive balance is a complex phenomenon, that it has many dimensions." Some scholars described competitive balance as the differences or distribution of playing strengths among teams (Dobson & Goddard, 2001; Fort & Quirk, 1995; Kesenne, 1996; Scully, 1989). Besides playing strengths, Demmert (1973) described competitive balance as quality differences. One of

the most mainstream descriptions of competitive balance is based on the interpretation of talent distribution (Dobson & Goddard, 2001; Fort, 2003; Késenne, 1996; Rottenberg, 1956; Szymanski & Kuypers, 1999).

In order to better understand competitive balance, this paper will sort out the key variables that affect competitive balance. According to Kesenne (2006), the distribution of league, market size, objectives of the clubs, team winning percentage, policy implication, etc. are all factors that may affect competitive balance. For example, the difference in the size of the market of the clubs will determine the potential of a team to attract audience and talent, thus affecting a team's economic revenue (tickets, ratings, sponsorship, etc.). Peeters (2011) and Nicolas et al. (2020) investigated the determinants of competitive balance in European men's club football and found revenue sharing, prize money, talent market, sports contest format, climate, number of clubs, tradition, timing, and financial regulation as determinants. In this paper, the key variables are grouped into three main categories, talent distribution, economic differences, and other factors. Talent distribution refers to a team's or club's pool of player talent. Economic differences here are mainly reflected in the differences in market size. The effect of talent distribution and economic disparity may be reciprocal, for example, accumulating more talented players will tend to help a team win and thus attract more fans, increase ticket revenue, etc. On the other hand, a larger market will attract more talented players to join and thus affect talent distribution. Other factors would include, for example, policy implication, club objectives, or team winning percentage. It is important to note that these factors may also have an impact on the distribution of talent or economic differences, thus affecting the competitive balance. For example, the implementation of the reverse-order-of-finish draft will help the weaker teams to accumulate talented players to a certain extent, thus improving the uneven distribution of talent.

Figure 1 provides a visual overview of critical variables contributing to competitive balance in the league.

Figure 1. Critical Variables Contributing to Competitive Balance



Uncertainty of Outcome Theory

When referring to competitive balance, it is important to note another concept, namely uncertainty of outcome. Uncertainty of outcome is one of the defining principles of team sports economics. Watanabe (2012, p. 314) claims that "competitive balance is the legitimate incarnation of uncertainty." Uncertainty of outcome is a crucial expression of the business and economics of team sports (Kringstad et al., 2004). Its importance is emphasized by Dobson and Goddard (2001, p. 125), who claims that "uncertainty of outcome is the lifeblood of any sporting event." The uncertainty of the outcome is the result of the league maintaining competitive balance.

The Uncertainty of Outcome Hypothesis (UOH) was first proposed by Rottenberg (1956), who argued that uncertainty of outcome would attract more spectators and lead to more gate revenue. In other words, the hypothesis is based on the measurement of fan behavior. It describes the link between the competitive balance in a given league and fan demand for that product (Manasis et al., 2015). The definition of outcome uncertainty has likewise been extensively discussed. In contrast to Dobson and Goddard (2001), who defines uncertainty of outcome as "unpredictability," Gerrard (2004) defines it as "the degree of predictability in individual contests and tournaments." According to Forrest and Simmons (2002, p. 229), the

uncertainty of outcome is "a circumstance in which a specific match inside a league system has a degree of unpredictability about the conclusion, and by extension, the entire tournament does not have a predetermined winner at the start of the match." Szymanski (2003) summarizes three basic assumptions to describe the uncertainty of outcome hypothesis. For starters, unequal resource distribution leads to unequal competition. Second, public interest declines when the contest's outcome becomes predictable or when. Finally, according to the third point, sport-specific redistribution structures increase match uncertainty. This study will be based on these three assumptions as a criterion of uncertainty of outcome.

Applying an accurate scale of outcome uncertainty has been challenging for many years. According to Brandes and Franck (2007), identifying the time scale during which uncertainty of outcome is researched is critical to deriving sensible and accurate measurement methods for competitive balance. In general, the uncertainty of outcome can be divided into three-time dimensions (Cairns et al., 1986; Goosens, 2006): the short-term or single match, the mid-term or seasonal, and the long-term uncertainty of outcome. The level of uncertainty of the outcome of an individual match is mainly reflected in the difference in quality between the two teams matched in a particular match. The mid-term uncertainty of outcome focus on a seasonal scope, such as play-off, championship phase, or cup competition. Szymanski and Kuypers (1999) define long-term uncertainty of outcome uncertainty about the championship. In other words, the third dimension broadens the scope of measurement into several seasons, which reflects whether a continuing dominance of one or more clubs exists (Borland & Macdonald, 2003; Brandes & Franck, 2007; Késenne, 2014). In the study of this paper, although quantitative analysis is not involved, the choice of the temporal dimension of outcome uncertainty is still not negligible because it will affect the accuracy of our judgment on competitive balance. Since competitive balance in the short- or medium-term time dimension is often not universal, we wish to explore

the competitive balance of CBA leagues as a whole, so the third dimension, i.e., long-term uncertainty of outcomes, will be the choice of this study.

Grounded Theory

In the 1960s, two sociologists, Barney Glaser & Anselm Strauss, developed the qualitative research method ‘grounded theory' (Glaser & Strauss, 1967). In their book titled ‘The Discovery of Grounded Theory,’ they explicitly propose developing theories in data-based research rather than deducing testable hypotheses from existing theories. Strauss and Corbin (1990, p. 12) defined ‘grounded theory’ as ‘The theory that was derived from data, systematically gathered and analyzed through the research process.’ Charmaz (1998, p. 10) further explained it ‘Grounded theory stresses discovery and theory development rather than logical deductive reasoning which relies on prior theoretical frameworks.’ There are now three primary variants of the grounded theory method (GTM): the constructivist approach of Charmaz, the Glaserian approach, and the Straussian approach (Holt et al., 2021). Some scholars have tried to classify GTM according to the philosophical system behind it (Weed, 2017), while Timonen et al. (2018) argue that there is no need to follow such a strict division, GTM 'can be put to work, in a pragmatic way, from any perspective, whether staunchly positivist, radically constructivist, hypercritical, or anything in between' (p. 2).

The main difference between the three variants of the GTM is whether the literature is used in theory construction. Glaser (1978, 1992) has consistently argued against conducting a literature review, arguing that using existing theories early in a study may lead to preconceived ideas. Charmaz (2006) agrees that the idea of pre-existing theory should be avoided as much as possible by adding it to the data but argues that if there are no preconceived ideas it is impossible to conduct research. Strauss argues that the literature can be used at all stages of research and that researchers should avoid preconceived ideas at all times (Corbin & Strauss, 2015). Until

recently, Holt et al. (2022) again dismissed the idea of ignoring the literature. Many scholars have also expressed the view that knowing as well as using the literature is helpful to ensure the novelty of the research question as well as the soundness of the study, but at the same time, researchers should also strive to ensure openness of the data (Conlon et al., 2015; Foley & Timonen, 2015; Timonen et al., 2018).

The main characteristic of grounded theory lies in comparing, analyzing, and generalizing data based on the collection of abundant data, abstracting concepts, refining categories, and extrapolating upward for theoretical construction. Typically, the goal of employing GT is to provide a theoretical framework that could explain how and why individuals, groups, or communities experience and react to certain situations (Corbin & Holt, 2011). Sports are a part of society and are relevant to many areas of social life, such as economics, politics, family, education, and even religion. Sports are social constructions that are given form and meaning by people as they interact with each other (Coakley, 2004). GT is about explaining social phenomena or processes and understanding the formation of these processes' conditions or consequences. Because the processes involved in sports span different demographic types and social contexts, a wealth of data lends itself to GT to understand the analysis (Sotiriadou & Shilbury, 2010).

As a concept that has been widely researched in sports economics, quantitative research seems to have been its dominant research approach. A large number of methods and models have been developed to measure the competitive balance in sports leagues. However, academic research to understand the causes of competitive balance or imbalance in sports leagues through GT seems to be missing. A word search on 'Grounded Theory', ' Competitive Balance', and 'sport' in Taylor and Francis publications including journals such as Sport in Society, Journal of Applied Sport Psychology, and the Intentional Journal of the History of Sport resulted in only

zero paper including these key words. The reason for this phenomenon is that competitive balance has been well-established and applied in Western sports leagues. It does not seem to be very meaningful to reconstruct the processes and factors that influence the formation of competitive balance in leagues.

Given that the development path of North American or European sports leagues is very different from the Chinese professional sports leagues studied in this paper. Chinese leagues are still at the stage of commercialization and professionalization. Studies of Chinese sports on competitive balance mainly rely on the theoretical framework already developed in the West. Therefore, constructing the competitive balance of leagues based on the grounded theory will help to explore the necessity and significance of competitive balance for Chinese professional sports leagues more comprehensively and deeply, and improve the attractiveness and service quality of leagues.

Statement of Problem

While many studies have been conducted to examine the importance of competitive balance to professional sports leagues, truly determining the necessity and significance of competitive balance in the actual circumstances of Chinese professional sports and exploring a more comprehensive issues and causes of competitive balance through the lens of managers or coaches has been neglected. In particular, CBA, one the most popular sports leagues in China, has adopted different policy regulations to maintain competitive balance. So, the deeper question is, ’CBA has competitive balance problem or not’, ‘Which areas lack competitive balance?’ ‘What is causing the competitive imbalance?’ ‘How can competitive balance be measured from a new perspective?’ ‘How to address the lack of balance?’ By understanding the actual situation of competitive balance in Chinese professional sports leagues, identifying the barriers that limit the

application of competitive balance, discussing the critical issues that need to be addressed, and help Chinese sports organizations enhance the quality of their game products and services.

This qualitative study focuses on exploring whether the CBA is actually applying competitive balance and attempts to develop the framework of competitive balance meets with the CBA based on grounded theory. Specifically, the research questions of this paper are: Whether does CBA have competitive balance or not. Which areas lack competitive balance? Why do these areas lack of balance? How to solve these problems? We will interview team managers to understand their perceptions of competitive balance in the league and whether the competitive balance policies implemented by the league are effective. We will be able to provide an inside perspective on the current state of competitive balance in the CBA leagues and answer the main research question. Through an in-depth study of the current state of competitive balance in the CBA leagues, we can better promote a sound system for Chinese professional sports leagues to maintain competitive balance, attract more fans, and build a healthy sports league.

Significance of Study

In recent years, the demand for sports in China has proliferated. In 2019, the total size of China's sports industry reached 2.9 trillion yuan, and some scholars predict that the value added to China's sports industry will exceed 5 trillion yuan in 2025 (Jiang & Xia, 2015). With the continuing expansion of the professional sports market, basketball has become one of the most popular sports in China (Lee & Tan, 2019). Compared to other professional leagues in China, the CBA has achieved significant economic success and influence. The CBA live attendance increased from 1.05 million in the 2007~2008 season to 1.79 million in the 2015~2016 season (Jiang, 2018). As one of the highest-level basketball leagues in Asia, the CBA has opted for frequent communication with the NBA, to learn and adopt advanced management system (Gao,

2019; Auriacombe & Vyas-Doorgapersad, 2019; Athiyaman & Magapa, 2019; Dunga & Mafini; Bonal et al., 2019). It is representative and necessary to select the CBA for the study.

Throughout the world's excellent sports leagues, whether the four major leagues in the United States or the 'Big Five' professional soccer leagues in Europe, the application of competitive balance has played an essential role in the development of the leagues. More scholars are looking into how this concept might be implemented into Chinese professional sport league management. However, the depth of relevant research is insufficient. There is also a lack of clarity in defining competitive balance, the blindness of most studies in imitating the use of competitive balance measures, and the singular use of the competition outcome for empirical research or quantitative analysis. This paper will explore competitive balance in the CBA league by combining the constraints theory and the grounded theory to provide a new perspective on the development of competitive balance in the Chinese professional sports league, which is still in its beginning stage. Semi-structured interviews with team-level managers or coaches will provide a micro-level understanding of how competitive balance is understood, how it is applied, and what impact it has had in the CBA. At the same time, open-ended interview questions will help to understand the necessity and significance of competitive balance in the CBA and try to find practical solutions to the competitive imbalance in the CBA. These studies will help to provide valuable reference implications for the management and policy establishment of other professional sports leagues in China, helping to further develop the professionalization of sports in China.

Operational Definitions and Explanation of Terms

1. Constraint: It is frequently described as a factor or factors, which may limit an organization’s performance in relation to its goal (Cox & Goldratt, 1986).

2. Competitive Balance: It refers to the level of parity among teams with respect to their abilities to compete and succeed, and this dynamic is shaped by various factors including the distribution of talent, economic disparities, and other factors[1].
3. Drafting: The professional sport draft is a process to distribute players among a pool of eligible teams (Koz et al., 2011).
4. Free Agency: "A restricted free agent (RFA) can sign an offer sheet with any team, but the player's original team can retain him by matching the terms of that offer. An unrestricted free agent (UFA) is free to sign with any team. Once they sign, they are a part of that new team" (NBA.com, 2022)
5. Revenue Sharing: "Revenue sharing is essentially a tax system to redistribute revenues from rich to poor teams in professional sports leagues (Rockerbie & Easton, 2018)

Delimitations and Limitations

Delimitations

1. This study will not be able to cover leagues other than the CBA.
2. This study will not interview other staffs in the league except team-level management and coaches, fans are not included either.
3. This study's participants have specific roles and responsibilities in the organization and may not be able to represent the perspective of each individual fully and accurately as they understand it in their different positions.

Limitations

[1] Other factors are here related to winning percentage, policy implication, and club objectives.

1. This study will not involve data specific to or rely on competition results as an indicator of competitive balance in the league but rather construct influencing factors based on interviews with managers based on grounded theory, which is inductive and preliminary.
2. This study will conduct interviews during the CBA season, and it may be difficult to control for the impact on team managers in the time dimension.
3. **This study will not test the theoretical model through quantitative analysis.**
4. **There is only one coder for this study, and a certain degree of subjectivity may be unavoidable.**

CHAPTER 2

REVIEW OF LITERATURE

The topic of this paper has rarely been studied. However, there has been a significant amount of research and theory on competitive balance in North America and Europe, which has contributed to the development of this study. Specifically, the origins and development of the concept of competitive balance, how each region and league perceive it, how rules are set to maintain competitive balance, and what impact each league's rules have on competitive balance are all critical to help understanding the development of competitive balance in Chinese professional sports leagues.

Competitive Balance

Defining Competitive Balance

In the past few decades, the business of professional team sports, especially in North America, has been through strikes, escalation of players' salaries, explosive growth in the value of cable-rights contracts, the combination between sports and entertainment, more new professional teams, franchise relocations, and an explosion in the construction of publicly financed facilities, etc. However, one concept that has always been in the spotlight while going through these tumultuous changes is competitive balance.

A large number of scholars have tried to define competitive balance. In sports, competitive balance refers to the degree to which competitors (individuals or teams) are evenly matched (Fort & Quirk, 1995). Zimbalist (2002) compared competitive balance to wealth: "Competitive balance is like wealth. Everyone agrees it is a good thing to have, but no one

knows how much one needs" (p. 111). This analogy emerged after decades of research on competitive balance in professional sports, which shows the difficulties of defining a hazy concept that changes depending on the sporting environment or the type of sport. The origin of competitive balance is generally considered from Simon Rottenberg's paper in 1956, he noted that "the nature of the industry is such that competitors must be of approximately equal 'size' if any are to be successful; this seems to be a unique attribute of professional competitive sports" (p. 242). Baseball Commissioner Allan H. Bud Selig assembled a group of well-known in 1999 to investigate the impact of revenue inequalities on competitive balance. It issued "The Commissioner's Blue-Ribbon Report on Baseball Economics" (BRR) (Levin, Mitchell Volcker, & Will, 2000), which defined competitive balance qualitatively in addition to more quantitative theoretical and empirical measures of competitive balance "In the context of baseball, the proper competitive balance should be understood to exist when no clubs are chronically weak because of MLB's financial structural features. The proper competitive balance will not exist until every well-run club has a regularly recurring hope of reaching postseason play" (Levin et al., 2000, p.5).

Besides the official document's definition, one of the frequently cited definitions of competitive balance is from Forrest and Simmons (2002), who states that "a league structure which has relatively equal playing strength between league members." (p. 229). Furthermore, by compiling the definition of competitive balance, there is an attribute often emphasized by scholars, which is equality, such as equal opportunity, equal size, equal distribution of talent, etc. This is one of the reasons why the concept of competitive balance has emerged and has been so widely discussed. People want to protect equality in sports and the uncertainty of outcome. Sport is inherently competitive. With individuals or teams, the outcome is often characterized by

uncertainty. In order to better ensure that other factors do not control the game's outcome, the league needs to protect this equality, or in other words, competitive balance. Also, competitors in the sports market need to allow their opponents to survive and have a shared incentive to ensure their competitors' competitiveness (Rottenberg, 1956).

Why is Competitive Balance Important

Sports leagues differ from other organizations in one crucial aspect: selling competition on the playing field (Fort & Quirk, 1995). Therefore, not only does the absolute quality of play influence demand and investments in training are socially efficient (Lazear & Rosen, 1981), but also the demand and quality of competition play an important role in sports. In 2003, Borland and Macdonald concluded that the demand for sports could be divided into five categories based on their review of literature on the body of sports demand: consumer preferences, economics, quality of viewing, characteristics of the sporting contest, and supply capacity (Borland & Macdonald, 2003). As Quirk and Fort (1992) said: “One of the key ingredients of the demand by fans for team sports is the excitement generated because of the uncertainty of the outcome of league games. In order to maintain fan interest, a sports league has to ensure that teams do not get too strong or too weak relative to one another so that uncertainty of outcome is preserved” (p. 243).

When consumers' demand largely depends on inter-team competition and rivalry, the necessary interactions across teams define the unique nature of sports. Poorly contests between teams would eventually reduce fans' interest and industry revenues. We can sort out a simple logical relationship between competitive balance and leagues' revenues. The primary source of income for the sports league is the fans because their attendance at the games will affect the ticket revenue, which accounts for a large percentage of the revenue of many professional sports teams. Thus, the more critical reference in this revenue generated by fans is the willingness to attend. One factor that has a significant impact on the fans' attendance is the quality of the game itself.

According to the uncertainty of outcome hypothesis (Rottenberg, 1956; Neale, 1964), higher levels of competitive balance increased broadcast viewership, game attendance, general interest, and income (Knowles, Sherony, & Haupert, 1992; Rascher, 1999; Szymanski, 2010; Weber, Kempf, Shibli, & De Bosscher, 2016). No one wants to watch a sports game that already knows the outcome. Therefore, we can see a potential impact of competitive balance on league revenue, which explains why competitive balance is essential for sports leagues.

Unbalanced sports competitions are associated with particular risks, such as the chance of elite teams splitting off and reorganizing into their league or the risk of lagging clubs going bankrupt (Michie & Oughton, 2004). Even though empirical evidence does not always support the importance of a balanced competition (Borland & McDonald, 2003), it is widely believed that an extreme imbalance in sports events would reduce spectator engagement. In late 2001, MLB made a national poll of 1,000 fans, claiming that competitive imbalance was a severe problem for 75% of those polled; 42% said they would lose interest in the game if more teams did not have a realistic chance of winning. "We have a competitive balance problem," said Sandy Alderson, MLB's executive vice president, summarizing the findings. "This is something that the ordinary fan is interested in. They do not seem to mind whether the business is losing money. They are concerned if it hurts their teams" (Rogers, 2001, p. 1). The fact is that every sport has to confront the strength difference among competitors.

There has not been a once and for all solution or set of regulations to address this issue. Considering the uncertainty of outcome is a crucial component of fan demand, it is hard to deal with weak teams or weak opponents meeting high-level rivals, which is as much or more of a problem as dealing with strong teams because there is someone interested in watching the very best individual performers and teams. Sports leagues introduce lots of regulations or competing

rules to achieve this. For instance, tennis seedings are determined based on recent results, with the expectation that the strong will face the strong in later rounds; boxing divides fighters into weight classes and uses ranking and ladders to arrange contests between opponents who are evenly matched; qualifying times are used in auto racing, track competition, and swimming to ensure competitive fields; in thoroughbred racing, claiming race is a technique that allows horses of roughly comparable ability to compete in the same event.

Research on Competitive Balance

The theoretical developments of competitive balance started with Rottenberg (1956) and El-Hodiri and Quirk (1971). In Rottenberg's article, he discussed the importance of the Coase Theorem (Coase, 1960), which hypothesized that the allocation of playing talent in professional sports leagues would be unaffected by property rights, in understanding talent distribution among baseball teams and listed several market problems in the baseball labor market and the organization, such as monopsony, reserve clause, waiver rule, and draft system in the league. Then Neale emphasized the collaborative nature of production in professional sports in his 'The peculiar economics of professional sports in 1964. Neale discussed the 'Louis Schmelling Paradox' and used Heavyweight boxing as an example. To address this paradox, he distinguished between 'sporting' and 'economic' competition. After Neale concludes that the league is the decision-making unit in professional team sports rather than the individual team or club, Sloane questions it in 'The economics of professional football: the football club as a utility maximizer' by suggesting that Neale overemphasized mutual interdependence. "The fact that clubs together produce a joint product is neither necessary nor sufficient for analyzing the industry as though the league was a firm" (Sloane, 1971, p.128). There have been lots of influential journal articles on the development of the economics of team sports literature.

Unlike Rottenberg and Neale, both used a discursive style to present their insights. El-Hodiri and Quirk (1971) constructed the first formal decision-making model in a professional sports league, which incorporated certain basic and essential features of the industry. They also found that individual team profit maximization is inconsistent with equal playing strengths among the teams. Fort and Quirk (1995) reviewed the immediate economic effects of the cross-subsidization devices in sports leagues and the early theory. Moreover, the model they developed is an excellent introduction to how a professional sports league works and introduces readers to the variance in win percentages across teams in professional sports leagues. The issue of market size, which causes competitive imbalance, is central to their model. The difference in win percentage has nothing to do with what happens on the field. In the long run, two teams with the same market size each choose a 0.500 victory winning percentage. When two teams have differing market sizes, however, the winning percentages chosen by each club are not identical.

Hoehn and Szymanski (1999) contrasted the talent market of Europe with North America, which theoretically implicated the open talent market in world football. They build a basic framework to analyze the role of European competition sports strategy. At the same time, Dobson and Goddard (2001) also started to do the first comprehensive survey of research that focused on professional football at the club level in England. Other distinctions between the North American and world models include the objective functions studied by Kesenne (1996, 1999, 2000). Nonetheless, Marburger (2002) produced a simple model to figure out the implications of the allocation of players and provided a list of the remaining theoretical contributions to competitive balance. According to Zimbalist (2003), a league's performance is determined by "the degree of balance among its teams" (p. 503).

Since then, the empirical literature on competitive balance has been separated by Fort and Maxcy (2003) into two areas: the analysis of competitive balance (ACB) and the literature tests the uncertainty of the outcome hypothesis (UOH) literature. These lines are not limited to a single league, but also encompass multiple several leagues (Rocke, 2019). The ACB topic focuses on how policy changes adopted by professional sports leagues affect competitive balance. The UOH applies to competitive balance and its effects on consumer behavior (Soebbing, 2008). In the following sections, we will base on the above segmentation to organize and review the studies on competitive balance.

Analysis of Competitive Balance (ACB). Fort and Maxcy (2003) regard the ACB focuses on 'what has happened to competitive balance over time or as a result of changes in the business practices of pro sports leagues" (p. 155). The more precise definition of the ACB examines the evolution of competitive balance in itself, and important methodological breakthroughs have evolved in the field of indicators for defining the phenomenon and their applicability, as well as comparisons across many times, fields, and sports. There are lots of scholars who make contributions to the ACB literature, such as Demmert (1973), Scully (1989), Balfour and Porter (1991), Quirk and Fort (1992), Vrooman (1995), Szymanski and Kuypers (1999), Dobson, Goddard, and Ramlogan (2001), Eckard (2001a, 2001b), Fort (2001), Maxcy (2002), Fort and Maxcy (2003), Goossens (2003), Pawlowski, Breuer and Arnd Hovemann (2010), Evans (2014), Lenten (2015). Considering it's a lengthy list, we will not go through them all.

After Fort and Maxcy (2003) emphasized the importance of ACB for analyzing competitive balance, a large number of scholars followed their footsteps and conducted more studies. Since the goal of ACB is to track competitive equilibrium, it involves different

dimensions and indicators to measure, such as single season or multi-season, concentration, and dominance. Evans (2014) reviewed and integrated in detail the measures of competitive balance in the ACB in his article, which will not be repeated in this paper. He divides the measures into three categories: a) Measures of concentration; b) Measures of dominance; c) Measures combing concentration and dominance. These three categories contain a total of 19 different methods, such as standard deviation, relative entropy (*R*), Herfindahl-Hirschman Index (HHI), etc. It should be added that Doria and Nalebuff (2021) presented a general model of competition which leads to unbiased variance estimates.

Uncertainty of Outcome Hypothesis (UOH). Different to the Analysis of Competitive Balance, the Uncertainty of Outcome hypothesis (UOH) studies focuses on the relationship between competitive balance and demand for the sport. Rottenberg (1956) expressed a prediction of the relationship between tournament attendance and consumer outcome expectations by arguing that attendance should increase as the uncertainty of the outcome of the tournament increases. In 1992, Knowles, Sherony, and Haupert explained that ‘UOH is predicated on the assumption that fans receive more utility from observing contests with an unpredictable outcome, and posits that the more evenly team playing abilities are matched, the less certain the game's outcome and the greater the game's attendance will be.’ Besides them, Forrest and Simmons (2002) also state a definition of the uncertainty of outcome that: "a situation where a given contest within a league structure has a degree of unpredictability about the result and, by extension, that competition as a whole does not have a predetermined winner at the outset of the competition" (p. 229). Rottenberg's (1956) statement has generated a large empirical literature. The UOH literature has much longer lists based on Dobson and Goddard (2001), Soebbing

(2008), Garcia and Rodriguez (2009), Watanabe (2012), Gábor Rappai and Diána Ivett Fűrész (2022) through reviews. We will not repeat these lists.

In the past 20 years, several scholars have studied the relationship between competitive balance, attendance, income distribution, and the game's attractiveness (Cox, 2018; Martinez & Willner, 2017; Schmidt & Berri, 2001; Soebbing, 2008; Vrooman, 2007). Szymanski (2003) partitioned the UOH into three sections based on its theory: First, unequal resource allocation leads to unequal competitiveness; second, when outcomes become less unpredictable, fan interest declines; and third, specific redistribution strategies are adapted to promote more outcome uncertainty. It is a well-known fact that in a perfectly balanced league, each team has an equal chance of winning, resulting in a high level of ambiguity regarding the league's acquired position, which increases spectator interest (Borland & Macdonald, 2003; El-Hodiri & Quirk, 1971). On the other hand, a less balanced league is expected to lower demand and, as a result, attendance (Késenne, 2006b; Zimbalist, 2003). According to Szymanski (2001, 2006), an increase in club revenue concentration does not always imply a shift in CB, and attendance is nearly independent of CB stabilization. According to several studies, other factors have been found to improve demand for the sport even when there is a competitive imbalance. (Brandes et al., 2008; Coates & Humphreys, 2010; Franck & Nüesch, 2012; Buraimo & Simmons, 2015). Szymanski and Leach (2006) construct a panel regression between the winning percentage (WPCT) and the change in the number of spectators, then utilize the parameters to simulate the number of supporters in a perfect competitive balance.

Despite the importance and applicability of the uncertainty of outcome hypothesis (UOH) for professional sports worldwide, decades of empirical study have failed to generate compelling evidence for the role of outcome uncertainty for stadium attendance and television audience. For

example, Carrera & Gracia (2018) and Peeters (2011) analyze the relationship between broadcast rights and competitive balance. However, they have failed to build solid support for the importance of competitive balance in attendance or TV viewership. Lots of studies that look into the potential influence of short-term uncertainty on stadium attendance showed either no effect or an effect that contradicted the UOH (Benz, Brandes, & Franck, 2009; Buraimo & Simmons, 2008; Czarnitzki & Stadtmann, 2002; Feddersen, Borcherding, & Maenning, 2006; Forrest & Simmons, 2002, 2006; Pawlowski & Anders, 2012; Pawlowski & Nalbantis, 2015; Szymanski, 2001). Only a few papers support the UOH (e.g., Knowles, Sherony, & Haupert, 1992; Rascher, 1999). Coates et al. (2014), and Humphreys & Zhou (2015) found that fans have reference-dependent preferences. Humphreys and Miceli (2019) developed a consumer choice model to understand the role of consumer preferences in motivating UOH.

In the last few years, lots of studies trying to analyze the relationship between competitive balance and attendance based on behavioral economics. Budzinski and Pawlowski (2017) organize a good summary of this area in their study. Behavioral sports economics is a relatively young area of sports economics research, but it could help better understand the disparity between the UOH, competitive balance, and consumer choices. Behavioral sports economics origins from behavioral economics, which focuses on the effects of psychological, cognitive, emotional, cultural, and social factors on individual and institutional decisions, as well as how these decisions differ from those predicted by classical economic theory (Zeiler, Kathryn, 2018). In recent years, more researchers have transferred this concept into the sports industry. Budzinski and Pawloski (2017) reviewed the existing literature. They focused on different facets of behavioral economics (reference-dependent preferences and loss aversion, threshold effects and satisficing utility, farming effects, and attention level effects). In this article, Budzinski and

Pawloski found out some interesting facts. For example, the relationship between home win probabilities and demand is u-shaped, a theoretical rationale for the common empirical. Based on this, they found that fans seem to care more about long-term uncertainty instead of short-term. Moreover, they also pointed out the shortcomings of behavioral sports economics and discussed the future direction of this area. To summarize, the UOH literature generally analyzes competitive balance as a cause; that is, it investigates how it influences demand as an independent variable (Gábor Rappai, Diána Ivett Fűrész, 2022)

Actions to Maintain Competitive Balance

Through the previous analyses, we understand the strong connection between competitive balance and the uncertainty of outcome, and we have discovered the impact of uncertainty of outcome on the leagues, especially in revenue. Whether a professional sports league in North America or Europe, they usually have two primary goals: profit-maximizing or winning maximizing. Nowadays, the sports industry has no unified statement that owners of sports teams have profit maximizing or winning maximizing goals. Some scholars have suggested that owners of teams are winning or utility-maximizing because professional sports leagues often with a break-even constraint, which does not allow teams to chase money without consideration. At the same time, some articles suggest that the owners are profit maximized. This article will not discuss who is more important but focus on how professional sports leagues create competitive balance to achieve their goals.

Before we make a list of the restrictions or regulations of the leagues, it is necessary to understand some essential objective factors that have a considerable impact on the leagues or the owners. One of the most critical objective factors is the size of the market in which clubs are located. The larger the population size and density market, the more fans and players may be attracted. The usual assumption is that considering North American professional sports leagues' main goal is profit maximization, franchises and relocation are the two factors that can least be ignored and affect the profit of a team. Whenever a professional sports team is created or needs to relocate, there will be intense competition between cities to attract and convince franchise holders, such as offering a fancy new stadium at public expense. Quirk and Fort (1999) document over 30 relocations among professional sports leagues between 1950 and 1997 (MLB,

NBA, and NFL). Franchises are significant in North American sports leagues, protecting holders' interests.

However, who gave the leagues to hold franchises and maintain their monopoly positions? The Supreme Court awarded MLB protection from the Sherman antitrust laws in a historical case in 1992. Congress passed the Sports Broadcasting Act in 1961, allowing leagues to collectively sell broadcasting rights on behalf of their member clubs (Quirk and Fort, 1997; Scully, 1995). Within this framework, the primary purpose of the leagues is to implement rules that promote the teams' collective interest in achieving joint profit maximization. As time goes by, more and more issues continue to arise that affect the league and team's profitability. Among them, the competitive imbalance is the last thing the leagues want to see, as it will reduce the uncertainty of outcome and audiences' interest in the league competition, no one wants to pay for predictable sports games, and depress the attendances and revenues of all teams. As a result, the leagues set limits on club behavior in product or labor markets to prevent any team from obtaining a level of competitive dominance that would be detrimental to all teams' interest in maintaining a decent level of competitive balance (Dobson & Goddard, 2001). In the next section, we will review the competitive balancing mechanism widely used in North American sports leagues.

Reserve Clause

In the early history of MLB, NBA, and NFL, the reserve clause is the most critical restriction on the behavior of the teams in labor markets. The Reserve clause was effective in 1880 in Baseball, which was used for the next 80 years. It would allow teams to reserve players for each season unless they did not participate in the league for a year or opted out of their contract. At that time, American companies were restricted by the Sherman Antitrust Act.

However, MLB was immune from the antitrust laws by the Supreme Court's permission because it was too popular in the United States. Historically, exemptions have been granted on one of two grounds: 1) an immunization based on the outcome of a collective bargaining agreement or 2) a commercial necessity justified by the need to keep the league competitive (Balfour & Porter, 1991). MLB teams have the legal power to control professional players' move between major league clubs and build the farm teams systems owned by the parent clubs placed on independent teams from the NA leagues around the country. After MLB had significant success on the reserve clause, other professional team sports leagues, especially football, basketball, and ice hockey, tried to emulate what MLB did. For example, on June 18, 1921, the NFL passed the reserve clause was similar to the baseballs at the time.

This system dominated professional sports leagues for many years. The owners insisted that the reserve clause is the basic foundation of competitive balance because small-market teams will be able to retain their talented players. Their Minor League system developed the latter. The reserve clause protects talent distribution between small- and large-market teams. The economist, however, Simon Rottenberg, holds a different opinion that the reserve clause will not impact the allocation of players and competitive balance between small- and large market teams, also known as the Coase theorem. In 1976, Baseball's reserve clause was challenged in the Supreme Court that it should be understood as a one-year option clause. The Court decided that a player could satisfy his reserve clause requirements by playing for a year without signing a new contract and becoming a free agent. After that, all MLB players became free agents after finishing a minimum number of years in the major league.

The first American major-league athlete challenged the reserve clause was Rick Barry in the National Basketball Association. In 1969, he wanted to play for the Oakland Oaks in ABA

and left the San Francisco Warriors after his second season. Barry also became the first NBA player to join the rival league. After this happened, the Court forbade Barry to play in the 1967-68 season for the Oaks to uphold the validity of the reserve clause. Furthermore, this system was abandoned in 1976 when the free agency policy was initiated and fully implemented. Even though this system was no longer used, we cannot ignore that it positively affected the labor market of professional sports. The reserve clause avoids the rich teams with more potential markets that would outbid the poorer ones for the best available players (Dobson & Goddard, 2001).

After figuring out the basic history of the reserve clause's application, we also need to pay attention to the history of scholars' studies. As mentioned earlier, after Simon Rottenberg (1956), many sports economists refer to his idea as the invariance principle. El-Hodiri and Quirk (1971) formally demonstrated this principle in their theoretical model. Then the basic argument started with the profit-maximizing equilibrium. Some experts believe MLB teams are profit-maximizing firms which means they will trade players between teams until the marginal revenue from one additional win percentage equals the marginal cost of the talent required for that extra win percentage. Considering the reserve clause does not restrict the transfer of players between teams. Thus, it will not affect the profit-maximizing distribution. This theory was elaborated by Quirk and Fort (1992) and Fort and Quirk (1995).

In 1981, George Daly and William Moore argued that the reserve clause would affect competitive balance. Their central argument is that there are external effects between the revenue functions of clubs in a sports league and that if the externalities can be internalized, more significant profits will result. One way to internalize these external gains is the reserve clause. It promotes the competitive balance, which the owners would recognize as a shared interest

because this balance increases revenues and profits. Even though Daly and Moore focused on the empirical evidence of the validity of the invariance theorem, they do not address this issue directly. After that, there was a rigorous theoretical case against the invariance principle by Stefan Szymanski (2004). He used the concept of Nash equilibrium and demonstrated that revenue sharing would impact competitive balance, but his model for the reserve clause is yet to be explored.

Before we review and discuss the effect of the reserve clause on competitive balance, there is necessary to pay attention to the relationship between the reserve clause and player salaries because players' wage usually represent their talent value and the distribution of talent, which is one of the most critical factors related to competitive balance. In Scully's (1974) discussion, he points out that the reserve clause reduces player salaries and provides some evidence to prove his point. In an era when the reserve clause is widely used, free agents are instead to command unconscionably high salaries, which is unfair for those players under restriction. For example, Renaldo Nehemiah, a world-record hurdler who had never played football before, engendered high bidding when he entered the National Football League.

Teams that are championship hungry are often more inclined to enter the free-agent market to acquire critical pieces of the puzzle if they do not have to give up any crucial players as compensation. And for the poor teams, perhaps more active in the free-agent market. They are faced with the reality that there is no way to improve their team's level of competition immediately. Moreover, such teams may pursue and sign free agents to improve their team's chances of winning and box office appeal for them. This also means that free agents will promote rather than destroy competitive balance (we will discuss the effect of free agency on competitive balance later in the next section). The widely stated argument by owners that a

reserve clause is required to ensure competitive balance within leagues should be viewed with suspicion in professional sports. Managerial actions at the time imply that football owners' opposition to free agency derives from a desire to reduce pay rather than achieve competitive balance. The impacts of free agency in big league baseball and the NFL were experimentally examined to ascertain as plainly as feasible the requirement for a reserve clause to promote competitive balance (Balfour & Porter, 1991). They show that liberalizing free agency will not destabilize the competitive equilibrium and that this justification should no longer be used to support antitrust exclusions.

Revenue Sharing

Revenue sharing was signed into law in October 1972 by U.S. president Richard M. Nixon, a standard rule system in professional sports leagues. It is a tool used to divide revenue across different franchises in a sports league, and it comes in two primary forms: one is an equal distribution of non-local media, sponsorship, and merchandise revenues among all clubs in the league, and the other is redistributions from large market teams to small or medium market teams. The National League of MLB used the gate revenue sharing in 1876. At first, the league shared the gate revenues equally; then, the percentage went down. In the mid-1990s, the visiting teams were only 5 percent of gate revenues. The National Hockey League (NHL) started a limited gate revenue sharing system in 1925, which is 3.5% of home gate receipts. After that, maybe the most well-known revenue-sharing scheme is that operated by the National Football League (NFL). They adopted a much more extensive gate revenue sharing plan in 1960, which is 40% of designated stadium income paid to the visitors. In some European football leagues, such as England and Germany, the revenue from the sale of broadcasting rights is distributed according to a set of guidelines devised by the National Football Leagues.

Some scholars (Schmidt & Berri, 2001) have questioned that MLB's competitive balance is declining. Also, the imbalance in MLB has caused many fans and owners to be unsatisfied and is often mentioned as the biggest problem in the league (Lewis, Sexton, & Lock, 2007). Before 2000, the National League and the American League used the gate revenue sharing plan up to the 1995 seasons. In the 1996-2001 seasons, MLB tried to use different hybrid plans in each season. The MLB Commissioner Bud Selig even created an independent panel, The Blue-Ribbon Panel, to examine the imbalance issue. The Blue-Ribbon Panel claimed that one of the reasons for the persistent lack of competitive balance is "the large and growing disparity between what are called local revenues" (Levin, Mitchell, Volcker, & Will, 2000, p.6). It was not until the October of 2006 that MLB and the players association reached a five-year Collective Bargaining Agreement (CBA) on the straight-pool revenue sharing policy that requires all 30 teams to pay 34% of their local revenues into a shared pool and split evenly among the 30 teams (Jacobson, 2008, p. 1). In 2007, the contribution rate dropped to 31%, but the pool still had $312 million of wealth transferred from high to low-revenue teams (Fatsis, 2006, p. 2). Nowadays, in MLB, every team needs to contribute 48% of all local revenues, including local TV revenue, gate receipt, concession, sponsorship, parking, etc., and the total amount is split equally (3.3% of the total) among all 30 teams.

Until now, the revenue sharing system is still used in Major League Baseball (except for the 2020 seasons, the local revenue sharing was paused because of the global pandemic). However, there are still some problems with this scheme. In professional sports leagues, revenue sharing effectively redistributes money from wealthy to poor teams. Nonetheless, the truth is that some small-market teams get the most out of the system but do not use the money to improve their team competitiveness, which defeats the purpose of the league's original system. For

example, in the 2009 season, MLB distributed about $400 million to small-market teams, such as the Marlins, Royals, and Pirates. Most money comes from the Yankees, Red Sox, Mets, and other high-revenue teams. At the same time, these small-market teams take more in revenue sharing than they spend on their players' payroll. According to Forbes Magazines'' annual team valuations, ironically, the teams with the lowest player payrolls are some of the league's most profitable.

Besides revenue receiving teams, some high revenue teams may find creative ways of concealing money sources so that they do not appear to be generated by baseball, also called "masking revenue." For example, the revenue from concessions and parking was hidden by the St. Louis Cardinals baseball team. All parking and concession profits produced by the Cardinals were maintained by a division of the Anheuser-Busch corporation (named the Civic Center Redevelopment Corporation) in 1984. The Cardinals' balance sheet did not reflect this revenue, making them appear considerably worse than they were. Teams will not conceal revenue if it costs them money unless the estimated net return from masking is positive (Zimbalist, 1994), even though the Major League Baseball Collective Bargaining Agreement (MLB-CBA) includes specific threats that shared revenue should be used to improve the quality of teams. If revenue-receiving teams use that money for other purposes, they will be questioned by the commissioner (p.106); it is evident that this kind of threat does not play a good role in supervision, as we can see from the above example. In his article on revenue sharing in a sports league, Miller tries to solve this problem by building a revenue-sharing system that ties the amount of revenue received to the quality of the team (Miller, 2007).

The revenue-sharing system used by the NFL has been widely known in professional sports since 1961. In the early 1960s, commissioner, Pete Rozelle convinced team owners and

then ushered in an era of collectivism that would define the NFL's economic approach for the next 40 years. "League Think" philosophy is how Rozelle convinced the owners to sell their local broadcasting rights as a national package, collecting their resources and creating a product as a whole. At the same time, they can evenly earn much more valuable profits than the sum of their parts. For nearly forty years, the revenue-sharing system in NFL enhanced the league's competitiveness as a whole, and the audiences still enjoyed the game for a long time (Mullick, supra note 1, at 12). However, this system is not always perfect. In the 2000s NFL's collective mentality was eroded by the development of "local revenue," which makes some teams gain a competitive advantage by utilizing this unshared revenue that is the part other teams cannot earn by revenue sharing system. Even though the NFL's member clubs shared around eighty percent of the entire league's revenue during the 2004 season the unshared revenue was still increased, which is threatening the future competitiveness of the league.

Furthermore, the unshared revenue usually connects with the team's market size and stadium ownership, which means it is a suitable environment for the big-market team to earn more profit from unshared local revenue. After that, NFL's revenue sharing system categorizes two approaches to distributing league revenue. The first way is sharing the revenue generated by sponsorship agreements and licensing, governed by the "Master Agreement." The second sharing way includes all revenue generated by the actual game of the field, which is governed by the Collective Bargaining Agreement (CBA) and the NFL Constitution and Bylaws. During the 2003-2004 season, the National Hockey League (NHL) suffered an unprecedented crisis, 301-day lockout, and cancellation of the entire 2004-2005 season. After this, team owners and National Hockey League Players Association (NHLPA) started to discuss a new Collective Bargaining Agreement (CBA). At this time, revenue sharing–also known as an extensive player

cost redistribution system- was introduced into the NHL. At the end of the 2012-13 lockout season, the NHL had a new collective bargaining agreement that owners and players divide hockey-related revenue 50-50 each season. Compared to other professional sports leagues, the revenue-sharing system is not widely used in the National Basketball Association (NBA). Currently, the only revenue-sharing system in the NBA is the requirement that all teams share national television revenue and the luxury tax. The NBA does not currently share gate receipts, as well as other forms of local revenue, as the NFL does. This may all change when the new Collective Bargaining Agreement negotiations begin.

Many economists have studied the effects of different types of revenue-sharing systems. These studies have focused on the impact of systems on the distribution of talent in the league and the profitability of the league (Easton and Rockerbie, 2005; Kesenne, 2007), mostly using both theoretical models (Kesenne, 2000, 2015; Miller, 2007; Rockerbie, 2009; Szymanski, 2004; and Vrooman, 2009), and empirical evidence (Maxcy 2009; Rockerbie 2017). Others have focused on the effect on player salaries (Hill et al., 2015).

All these studies since the pioneering work of El-Hodiri and Quirk (1971). However, the research questions about revenue sharing have no different from the studies about restrictions in the labor market, such as the reserve clause. There is fairly broad agreement in the economic literature that all restrictions will tend to raise profits (Szymanski, 2003). In Rottenberg's argument, revenue-sharing schemes do not affect the distribution of talents in the labor market under the profit-maximizing assumption. This claim was proven by El-Hodiri and Quirk (1971). To a journal of economic literature review, "gate revenue sharing has no impact on competitive balance in the absence of local TV" (Fort and Quirk, 1995), which means that if a club receives

local television rights that are not shared, the competitive balance is altered by the distribution of all other revenue.

After that, many economists supported that revenue sharing does not affect competitive balance, such as Vrooman (1995), Atkinson, Stanley, and Tschirhart (1988). This support was changed when Marburger (1997) found that " the increased sharing of revenues may enhance competitive balance" (p. 122) with his model, which uses attendance as an increasing function of the home team and visiting team, but only when fans care about the relative and quality of a given team. Rascher (1997) concluded from his analysis that "El-Hodiri and Quirk and Fort and Quirk are correct in their assertion that revenue sharing has no effect on the distribution of talent under individual team profit maximization" (p. 46). Also, Rascher's paper turns the pure profit-maximizing assumption into a utility-maximizing model. Not only do the El-Hodiri and Quirk think that revenue sharing is not helpful for the improvement of competitive balance, but Miller (2007) also thinks the revenue sharing system will not change the outcome unless a high enough percentage is received from higher revenue teams while requiring a lower percentage from higher revenue teams. The revenue sharing system can improve the competitive balance by reallocating key marginal players among teams. Szymanski and Kesenne (2004) break down the invariance result and emphasize that revenue sharing even surprisingly worsens competitive balance. The utility-maximizing model includes not only the owner profits but also the winning percentage of a team.

Under the breakeven restriction, Kesenne (1996, 2000) argues that clubs are striving to optimize their winning percentage, and clubs can be profitable even if they do not aim to maximize profits. The different club objectives (winning maximization, profit maximization, and utility maximization) have varied impacts on a league's competitive balance (Kesenne, 2006). He

draws some interesting conclusions based on several models in Kesenne's paper. Total league income is lower in a win-maximization league than in a profit-maximization league, where playing talent is more efficiently deployed. In a win-maximization league, the distribution of playing talent results in a welfare loss. Players are assigned to teams whose productivity is not at its highest level (Kesenne, 2000). The competition will be better balanced if the small-market club is a win-maximizer, and the large-market club is a profit-maximizer (and vice versa). He also discusses the relationship between revenue sharing and the distribution of talent. All clubs cut their desire for talent similarly because they must split the increased match revenue generated by a different talent with each visiting club. Revenue sharing, on the other hand, promotes the competitive balance in a win-maximization league. Because of the breakeven restriction, the small-market club will grow its talent demand as long as it benefits from the sharing agreement, whereas the league-market club will reduce its talent demand. In a win-maximization league, the impact of revenue sharing on the equilibrium unit cost of talent is less clear. The outcome is determined by the relative size of the demand shifts since the large-market club reduces its demand for talent while the small-market club increases its demand for talent.

Some economists analyze the effect of revenue sharing on competitive balance under utility maximization teams (Ditel, Grossmann, and Lang, 2011). As a result, they conclude that revenue sharing may either increase or decrease the competitive balance. The impact of revenue sharing on competitive balance is determined by (a) which club has the higher win percentage and hence is the dominant team in equilibrium, and (b) whether revenue sharing has a sharpening or dulling effect. "Sharpening effect" is the new effect identified by the authors, which is the opposite meaning of dulling effect. If revenue sharing positively influences marginal revenue,

the sharpening effect is evident; if revenue sharing harms marginal revenue, the dulling effect is there.

Free Agency

Firstly, we will briefly be introduced the history of free agency starts with Major League Baseball (MLB). Free agency came out of the 1972 Flood v. Kuhn Supreme Court case, in which Major League Baseball first granted the antitrust exemption. In 1975, the Major League Baseball Players Association (MLBPA) used arbitration to contest the perpetual renewal interpretation of the reserve clause, as established in the 1968 collective bargaining agreement's regulations (CBA). When the reserve clause ended, the players and the league signed a new collective bargaining agreement on July 12, 1976, which gave players a more comprehensive range of options as free agents. Although the new CBA still does not allow an entirely free market, if a player has six or more years in the major leagues (on the team's 40-man roster) and is not under contract for the next season, he becomes a free agent. The six-year clause has remained unaltered following MLB collective bargaining agreements. Major League Baseball has two types of free agents: Type A and Type B. The Collective Bargaining Agreement decided that Type A free agents were among the top 20% of all players based on the previous two seasons. The following 20% of free agents were classified as Type B. The bottom 60% of players were categorized as unclassified free agents.

Many studies focus on the relationship between higher salaries and free agency. Scully (1974), for example, showed that the reserve clause arrangement kept player salaries much below their marginal revenue product (MRP). Studies find that a significant salary increase after free agency is compatible with economic theory predictions. Sommers & Quinton (1982), Scully (1989), Hadley & Gustafson (1991), Quirk & Fort (1992), Kahn (1993), and Zimbalist (1992) are

only a few of the studies that provide empirical verification. Due to arbitrators utilizing free agent pay to make comparisons, free agency has pushed arbitration-eligible players' salaries substantially closer to MRP levels (Zimbalist, 1992).

The impact of free agency on talent distribution in MLB is debatable. Cymrot (1983), Besanko & Simon (1985), and Spitzer & Hoffman (1979), for example, discovered empirical evidence supporting the invariance principle in the early years of free agency. Because players preferred to move to prominent market locations as free agents, Daly and Moore (1981) gave contradictory hypotheses and evidence. Several studies demonstrate that the competitive balance in MLB has improved marginally since post-free agency (Fort & Maxcy, 2003; Quirk & Fort, 1992; Vrooman, 1996). Maxcy (2002) discovered a considerable improvement in competitive balance when comparing the average SDWP and SRCC in the twenty-five years following free agency to the preceding twenty-five years. According to Humphreys (2002), leaguewide competitive balance ratio (CBR) measures peaked in the 1980s and have been somewhat declining since the mid-1990s. Besides the effect of free agency on competitive balance, other researchers also found that free agency has changed talent distribution. Vrooman (1996) proposed that the improved competitive balance was due to the increased movement of free agents toward large markets. Free agency, for example, breaks up talented small-market clubs and reduces them to mediocrity, as poorly performing large-market teams are the most likely to sign free players. According to the empirical test, free agency resulted in a considerable redistribution of revenues from owners to players (Maxcy & Mondello, 2006). Regardless, there is evidence that free agency has impacted the game by changing the rate and kind of player transfers.

The NFL, NBA, and NHL have been slower to evolve free player mobility than baseball, which has a clear pre- and post-free agency demarcation. Furthermore, other leagues faced fewer impediments without an antitrust exemption, and each of the established leagues has been challenged by rivals since the 1960s. The introduction of competing leagues made the labor market for players more competitive, which resulted in a significant increase in player earnings during this period. The lack of an antitrust exemption also made it illegal for leagues to keep player reservation schemes in place. Before the summer of 1988, when a new collective bargaining agreement established unrestricted free agency, NBA players could not leave their team unless they were traded. NBA teams only have two ways to get new talents: draft or trade. The latter usually costs lots of money or talents, and the former refers to a better price-performance ratio. Therefore, it was critical to succeed on the draft day on the court. Tom Chambers, the 6'10 all-star player from the University of Utah, was the first unrestricted free agent in the history of the NBA. Chamber said, "There was no movement at all. Contracts were locked into what you could make". After the NBA players' union Larry Fleisher attempted to help Chambers become an unrestricted free agent, the league officially recognized players could be truly free to choose their teams when the contracts had finished, but with two conditions: 1) have been in the league seven years or more and 2) have played through NBA contracts.

As early as 1957, the Radovich ruling asked the NFL to allow free agency, and players who completed their contracts were required to play one year at the team's option. Commissioner Pete Rozelle implemented restricted free agency (the Rozelle rule) in 1963. However, before the 1977 season, the United States Supreme Court declared the Rozelle rule was declared illegal under antitrust law (Mackey v. National Football League, 1975/1976). Nevertheless, NFL still has Plan B to maintain a similar restricted free agency system, which

requires teams to give up the draft picks of comparable value to the teams losing free agents. The National Football Player Association (NFLPA) started work stoppages in 1982 and 1987 because they were unsatisfied with Plan B free agency. However, the strikes failed, and Plan B was implemented in 1993. After McNeil v. National Football League in 1992, the NFL and NFLPA agreed to a free agency system, which allowed players to become unrestricted free agents after five years, and this is the NFL's current agency system. Quirk and Fort (1999) attributed the delay to the player's union's comparatively poor bargaining position. In NFL they have more than two different types of free agents, such as exclusive-rights free agents (ERFA), restricted free agents (RFA), unrestricted free agents (UFA), undrafted free agents, and "plan B" free agency.

Until the late 1970s, the NHL replaced its reserve system with restricted free agency, similar to the NFL's. During the 1980s, the NHL still controlled the mobility of players. When Bob Goodenow replaced Alan Eagleson and became the executive director of the NHLPA in 1992, things changed for the players. First, Goodenow planned a strike in 1992 and started a negotiation with NHL about the new CBA, which included: lowering the age of free agents from 32 to 30 years old and establishing a salary arbitration system for non-free agents. Restricted free agency was maintained in the 1994 CBA, with unrestricted free agency accessible to players who met the age threshold. Until 1995, the National Hockey League (NHL) was not limited and restricted rights to players and admitted the player's right to become unrestricted free agents. NHL's free agency system is governed by Article 10 of the NHL-NHL Players Association (NHLPA) Collective Bargaining Agreement (CBA).

Empirical research on the effects of free agency on competitive balance in the NBA, NFL, and NHL has been poor. Richardson (2000) studied and analyzed this issue and found

improvement in the SDWP in the NHL. After him, Maxcy and Mondello (2006) further improved this point by comparing the ratio of actual-to-ideal balance of SDWP from 1951 to 2004. In the same year, Andrew Larsen, Aju J. Fenn, and Erin Leanne Spenner (2006) tried to use the Gini coefficient and the deviations of the Herfindahl-Hirschman Index to prove that free agency has increased the competitive balance in the National Football League (NFL).

Salary Cap

Over the previous few decades, sports leagues have grown to be significant revenue sources. Player salaries, as well as the money generated by teams and leagues, have risen dramatically. Competitive balance is essential in determining professional sports leagues' value. The league has tried many ways to ensure a regulated player labor market and avoid playing talent gathering on big-market teams that can offer better bids than the small-market teams. For example, in North American sports leagues, as we mentioned before, the league has established the player reserve clause and a transfer market so that players are not free to change the club they play for, even at the end of their contract. The league also has the reserve-order-of-finish draft and 'rookie draft' to ensure weak teams can gather more talents based on their last season's ranking. However, some sports economists claim that these regulations or improvements have little impact on the competitive balance in the league, as long as the clubs are profit maximizers. Fort and Quirk (1995) draw this conclusion in their well-known article in the Journal of Economic Literature “The problem of maintaining financial viability for teams in weak-drawing markets is a major one for sports leagues. The analysis here argues that an enforceable salary cap is the only cross-subsidization scheme currently in use that can be expected to accomplish this while improving the competitive balance in a league.”

The primary history of the salary cap is as follows. NBA was the first sports league to use the salary cap rule in the 1984-85 season. After that, football and hockey also introduced this restriction into their system. The NFL implemented the salary cap system before the 1994 season, and the NHL started to use it in the 2005-2006 season. Today, all professional sports leagues have free agency rules. In North America, the National Basketball Association (NBA), the National Hockey League (NHL), the Canadian Football League (CFL), the National Football League (NFL), and the Arena Football League (AFL) have all implemented salary caps. Also, salary caps have been introduced in Australia by the Australian Football League, the National Rugby League, and A-League Soccer to govern their labor markets. In Europe, the Guinness Premiership in rugby union and the Super League in rugby league are introduced salary caps.

The free agency system allows players to sell their service to other clubs after their contract end, and the structure of each league's salary cap regulation is different. Some of them differ from the limitation or the component of players' salaries, which parts should be counted in the salary cap, and which parts are not. Generally, the salary cap rule will restrict the highest bid from the clubs. They cannot pay players as much as they want, avoiding unfair bidding between big- and small-market teams. Like the other U.S. professional sports league, the reserve clause used to be a "dark age" for player salaries because once the club signs a rookie player from the draft, he is bound to the club for life unless the club wants to trade, sale, or put on waivers. Even when the contract ends, the club that drafts the player has monopsony control to resign the player, which means the club has little incentive to pay high salaries for the player they choose from the draft. This did not change until 1976, when the National Basketball Players Association (NBPA) and the NBA agreed on a new collective bargaining agreement that canceled the reserve clause rule in non-rookie contracts. However, many clubs still struggled with the high

compensation levels for players that free agency wrought. Gary Bettman brought the idea of the salary cap to the NBA. At first, during the 1984-84 season, the salary cap was set at $3.6 million.

Furthermore, it rose to $21 million in the 1996-97 season. There are two types of salary caps: soft and hard caps. In the NFL or NHL, their salary caps are considered hard caps because they have strict limitations to allow teams can exceed the salary cap. Teams that break the cap face fines, contract cancellations, and the loss of draft picks. According to previous research, even in the NFL, average league payrolls are usually above the salary cap, and large-market owners regularly and substantially violate the salary caps (Fort & Quirk, 1995). Compared to the salary cap, the salary floor seems to be less important. A salary floor represents the minimum amount of money that must be spent on players' salaries by the team as a whole, in addition to the minimum player salary set by the league. In the NFL, salary floor only applied to the 2013-2016 period (Philipse, 2015). Lastly, we can’t ignore salary slotting in the salary cap system. It is league-established rules or recommendations regarding initial compensation provided to a player based on draft positioning (Brown et al., 2021).

In the NBA, however, their "soft" salary cap systems have relatively loose restrictions on salaries, teams can exceed the soft cap, but the league will penalize them a percentage of the amount based on their overpaying salaries. The system has also undergone many modifications since the advent of the salary cap. For instance, there was a loophole in the 1983 agreement where teams were allowed to retain one free agent player whose salary would not be counted against the salary cap. Thus, some teams would resign their free-agent player. At the same time, some notable exemptions exist in the NBA's soft salary cap. The Larry Bird exception is one such exception, which gives a team with rights to a specific player an advantage in pay negotiations by allowing them to exceed the cap for that player. The Mid-Level Exception is

another example. This permits teams over the salary cap once a season to sign a player for the average league pay. The NBA's soft cap features give teams benefits that are not available under a hard cap. It is not hard to imagine that the salary cap has made it difficult for the top players who are highly paid to accept it because this regulation essentially limits their income. In 1993, there was a player strike in MLB because of the salary cap. This was the first time in North American professional sports that a whole postseason was canceled due to labor conflicts. From 1998-99, the NBA also went on strike for over 200 days because of disagreements between players and owners about the salary cap.

We cannot ignore the empirical literature of scholars or economists on the salary cap. Fort and Quirk (1995) and Quirk and Fort (1997) firstly provide an analysis of the sports league's salary cap when NBA introduced the salary cap in the early 1980s. Vrooman (1995) used a different model, which assumes explicit functional forms for the cost and revenues of team ownership, to address issues as Fort and Quirk mentioned. Rascher (1997) used comparing models in which club owners maximize utility, a linear combination of profits and winning percentage. Kesenne (2000) analyzes a cap on individual salaries. About the relationship between the salary cap and competitive balance, Larsen et al. (2006), Endo et al. (2003), Késenne (2000), Dietl et al. (2009), and Vrooman (2009) have done empirical and theoretical research. Larsen et al. (2006) use changes in the Herfindahl-Hirschman Index (HHI) (DHHI) and standard deviation measurements to study the effect on competitive balance in the NFL. Endo et al. (2003) use the Gini index to measure the distribution of wins in the NBA before and after introducing the salary cap from the 1974-75 to 2001-02 seasons. Késenne (2000), Dietl et al. (2009), and Vrooman (2009) all use a theoretical way to learn the impact of salary caps on competitive balance.

Beyond that, the impact of the salary cap on the social welfare of professional sports is not one-sided. Fans' preferences determine the impact on social welfare for aggregate talent and competitive balance. If fans favor aggregate talent, a salary cap that applies primarily to large-market clubs will boost social welfare, even though the salary cap will result in lower aggregate talent. Any binding pay cap, on the other hand, will lower social welfare if fans want competitive balance (Helmut M. Dietl, Markus Lang, Alexander Rathke, 2009). Totty and Owens (2011) used two different methods (standard deviation of winning percentage, deviation of HHI) to measure the effectiveness of the salary cap on competitive balance in different sports leagues. Not only did they find no evidence that the salary cap had a positive effect on competitive balance, but they also even found a statistically significant negative effect of the salary cap on the league the NBA.

Based on the literature examining the relationship between salary cap and competitive balance, we can organize the changes in people's perception of the salary cap. At first, the professional sports leagues believed that the salary caps would reduce owners' costs and improve the leagues' competitive balance. At the same time, owners wanted financial relief through a salary cap (Staudohar, 1998). The owners claim that the salary cap creates a fair environment where teams can spend similar costs to gather talent, and the distribution of talent will be close among teams, which enhances competitive balance (Endo et al., 2003). Economic theory, however, has serious doubt about the salary caps' positive impact on competitive balance. Rottenberg's Invariance Principle (1956) is well known for the claim that talent distribution in the league is dependent on revenue differences, not other factors. Rottenberg's invariance principle is also similar to the Coase theorem, which proposes that an asset will be used by the individual or firm that values it the highest, regardless of how property rights are distributed

(Coase, 1960). Thus, according to Rottenberg's Invariance Principle and the Coase theorem, salary caps will have little effect on competitive balance as long as owners are profit maximizers because even if the cap exists, the exact mechanisms of revenue are present. The difference in revenue amounts across league teams still affects players' choices. Someone would argue that lots of owners are win-maximizers in reality. However, there is a condition that owners' budget constraints dictate that it is profitable to do so. In order to achieve win-maximizing, teams need talent, and talent costs money to gather. This strategy is hard to provide owners with enough revenue from specific markets. Profits become the primary binding constraint for the majority of owners. In this case, players will move to the team that can provide the highest value under the salary cap.

Luxury Tax

After the last part about the salary cap, we cannot leave out the luxury tax because the two are closely related. The luxury tax is a more flexible version of the salary cap that allows teams to spend more than some specified threshold if they are willing to be taxed for that privilege (Elizabeth Gustafson). The luxury tax works on the one hand, to equalize the distribution of talent in the league and prevent big market teams from signing the most talented players, thus destroying the competitive balance needed to maintain fan interest. It also controls the money teams (mainly big market teams) spend on player salaries. Those luxury taxes paid more than a set threshold is either distributed to smaller market teams so that they have more revenue to spend on signing quality players or, in the case of Major League Baseball, used by the league for other predetermined purposes. Until today, the luxury tax has only been used in the National Basketball Association (NBA) and Major League Baseball (MLB) in the United States. The National Football League and the National Hockey League have not implemented this rule

because they have the "hard" salary cap, which requires the teams have a maximum amount of money allowed for player salaries, and no exception can exceed this limit. Therefore, NFL and NHL have no reason to use the "luxury tax" rule.

During the Major League Baseball strike, there was a disagreement between small and big-market teams. The former felt restricted by the relatively anemic budgets, while the big market clubs' players were unwilling to cut their payrolls. In this case, MLB became the first professional sports league to introduce a luxury tax, also called the "Competitive Balance Tax," as part of its Collective Bargaining Agreement (CBA). During the 1997, 1998, and 1999 seasons, this agreement imposed a luxury tax of 35 % for the first two years and 34 % for the third year on the clubs with the top five payrolls. The revenue sharing system replaced the luxury tax during the 2000 and 2002 seasons, but MLB reintroduced the luxury tax system in 2003. After this, MLB set fixed limits on players' payrolls every year. For example, the limit was $178 from 2011 to 2013 and $189 million from 2014 to 2016.

In NBA, before the luxury tax, team tax was in the collective bargaining agreement from 1999, which kept total league salary and benefits at or below 55% of basketball-related income (BRI) for the league (Elizabeth Gustafson). The NBA luxury tax was introduced in July 2003. As we mentioned, the soft cap allows teams to exceed the salary cap, even indefinitely re-sign their players based on "Larry Bird" exceptions. However, if teams' payroll exceeds a specific "tax level" limit, they will be punished by having to pay bracket-based sums for each dollar of payroll that exceeds the tax threshold. The luxury tax level is determined by a complicated formula, not by a specific law of variation. For instance, the luxury tax level for the 2008-09 season was 71.15 million. For the 2009-10 season, the luxury tax level dropped to 69.92 million; for the 2010-11

season, it rose to 70.3 million. In 2011, CBA changed the dollar-for-dollar tax provision system to an incremental system.

As an extension of the soft salary cap, the luxury tax system promotes competitive balance in the league. It reduces the revenue difference between different teams due to the market size. Some studies analyze the effect of luxury taxes on competitive balance. Gustafson and Hadley (1996) used a dual supply and demand model for top players to conclude that a luxury tax will lower the demand curve for top players on high-payroll teams while not affecting low-payroll clubs' demand. Based on two profit-maximizing clubs, one large-market club, and one small-market club, Marburger (1997) shows that luxury taxes with a linear subsidy function result in lower salaries and higher profits. However, they do not affect competitive balance. Redistributing the proceeds of luxury taxes uniformly among all clubs should be the proper way to reward small-market clubs and improve competitive balance. Besides Gustafason and Hadley (1996), and Marburger (1997), Fort (2003) also concluded that a luxury tax would tend to improve competitive balance and lower player salaries, moving rent from players to those receiving the tax proceeds. Ajilore and Hendrickson (2005) examine the effect of luxury taxes on competitive balance in MLB by empirically assessing the influence of luxury taxes on team competitiveness. Their findings demonstrate that the luxury tax introduced in MLB has reduced club competitive inequality. However, one team, the New York Yankees, is responsible for most of their results. Burg and Prinz (2005) propose a progressive tax on sports clubs' earnings or payrolls to improve competitive balance in team sports leagues. According to their theoretical study, both types of taxes will result in symmetric changes in the teams' marginal incomes or marginal expenses, resulting in a more balanced league. Helmut M. Dietl, Markus Lang, and Stephen Werner (2010) look at how a luxury tax might affect competitive balance, club earnings,

and social welfare, assuming that talent supply is elastic, and clubs maximize profits. It demonstrates that imposing a luxury tax raises the league's total salary payouts and results in a more balanced league. They also create a game-theoretic model of an n-club league with small-market and large-market teams, demonstrating that a luxury tax will improve the earnings of large-market clubs, but only if the tax rate is not set too high for small-market clubs.

Draft

Regardless of the sports league, choosing the right and competent people is one of the critical factors for the team's success. The form of talent selection in sports leagues also changes over time. In the early days, athletes would participate in various try-outs to showcase their skills and abilities to gain the approval of scouts or coaches for a chance to make the team. Try-outs are held on a larger, more robust scale at higher levels of competitive sport and often include fitness testing, scouting visits to meet the players, years of performance data, and video footage.

At the professional level, teams with larger budgets can attract more popular or capable athletes, which often leads to disparities between teams in the league. In 1935, two NFL teams, the Brooklyn Dodgers and the Philadelphia Eagles competed for the rookie Stan Kosta, a talented football player from the University of Minnesota, raising the price offer to $5000, a massive figure at the time. To alleviate the disparities, the "amateur draft" (also known as the "draft," "reverse-order-of-finish draft") was created. In 1936, the NFL introduced the 'reverse-order-of-finish' draft to prevent future bidding wars for college players.

The meaning of reverse-order-of-finish is that the team with the worst record the previous season was the first to choose college players for the following season, the team with the second-worst record was chosen first, followed by the team with the third-worst record, and so on. The purpose of this draft system is to give lesser teams a better chance to enhance their programs,

avoid expensive bidding wars for talented young athletes, and reduce the chances of a team monopolizing the best. The NBA, for example, adopted a collegiate draft for the 1949-50 season, following the NFL's lead. The National Hockey League (NHL) introduced it in 1963, and Major League Baseball (MLB) began in 1965. The NBA improved its draft system for the 1984-85 season by including a lottery for first-round picks. It was thought that under the previous system, teams with a limited chance of making the playoffs would lose games on purpose later in the season to better their selection position. The lottery system would remove the guarantee that a lousy finish would result in a low draft pick, removing the motivation to lose on purpose. Later, the NHL implemented its lottery mechanism.

Furthermore, as North American sports clubs have expanded their search for talent outside domestic lines, the NFL, MLB, NBA, and NHL have expanded their draft to include foreign players. These leagues also are bound by collective bargaining agreements to control their recruiting and development of the athletes (Dryer, 2008). For example, MLB, NBA, NFL, and NHL, are not allowed to recruit players through academies or the transfer market (Farah & Baker, 2020). Athletes are chosen once they have met the league's minimum age standards and have been invited to join a team through the entrance draft process. During the draft, teams follow the reverse order based on their previous year's performance ranking to select their rookies. The "first round" will be finished when the teams with the high record select athletes and then repeat the processes until all the pre-determined rounds are reached (Boulier et al., 2009). When a team selects a player, it means the team has the right to sign with the player a professional contract and own the player's service. Among foreign sports leagues, the Australian Football League (AFL) has conducted the draft system since 1986, Nippon Professional

Baseball's Central and Pacific Leagues have held their draft since 1965, Chinese Basketball Association started its official draft in 2015.

Owners and leagues introduced the draft system for two main reasons (Kahane, 2006). Owners believe that the draft system will positively impact competitive balance in their leagues. The argument is that without the draft, small-market teams will be struggled to compete for talented new players with big-market teams because wealthy teams have more advantages during a bidding war. As a result, the wealthy teams would become more muscular (and wealthier), while the poorer teams would become weaker (and poorer). The lack of competitive balance that would result would be detrimental not only to the poor teams but also to the league as a whole. This argument was challenged by Rottenberg's invariance principle in 1956, which claims that a player will eventually play in the team where he can achieve his most excellent marginal revenue, no matter who owns this player's talent currently. In the end, more talents will be gathered in the big-market teams, and even the leagues have draft systems because if poorer teams pick a highly talented player, they usually have two options: keep the player or trade to another team. In this case, the player is worth more to a rich club (including potential values) than the poorer club, and the latter will sell the player.

The second reason owners support the draft system is less discussed in public: the draft system shifts the economic rewards from players to the owners. Without the draft, talented rookies will sell their services to the highest bidder, the rich teams, because they are willing to pay more for their talent. However, under the restriction of the draft system, players have to play for the team who chooses them and are not allowed to sell their talents as free agents. The owners will benefit from this system because they can increase the team's revenue by utilizing players' talents (put the player on the team or sell him to another team). Thus, in the draft system,

talented young players' salaries will be decreased. Kahane (2006) insists that the draft has less impact on competitive balance and more influence on transferring wealth from players to the owners.

Although professional sports drafts (especially NFL) have become well-known television events, the public and Congress were skeptical of amateur drafts in the middle of 20 century. In the 1950s, Brooklyn Congressman Emanuel Celler noticed this situation and held a series of hearings examining baseball's antitrust exemption, which notably included the draft. In 1978, James Stith, the first-round pick of the Washington Redskins, sued a lawsuit claiming that a free market for his services would have provided him with a better contract. Smith v. Pro Football became the first case to challenge a draft, establishing the ton for Sherman Act litigation. The Sherman Antitrust Act prohibits monopolies and restraint of trade. In other words, the Sherman Act's primary goal is to protect the public interest. In the sports industry, however, the public is interested in somewhat balanced competition, contrary to many aspects of professional sports organizations. According to the Standard Oil court, only unreasonable trade barriers are subject to antitrust action under the Sherman Act.

The basic logic of the reverse-order-of-finish draft is that the earlier a player is selected, the more "potential" the player has (the amount of potential is determined by the team that holds the draft). Therefore, under regular operation, the order in which players are drafted in this draft system should have some degree of relationship to their performance in the professional game (Boulier et al., 2009). However, many experts in the industry are skeptical that teams can select the most cost-effective players. We have a really famous example, one of the best NFL quarterbacks in history: Tom Brady was chosen in the 199th of the sixth rounds of the 2000 draft. Tom Brady is not an exception. Warren Moon, David Krieg, Kobe Bryant, etc. In another

case, Staw and Hoang (1995) discovered that NBA players who were picked early had their playing time exceed their performance. The authors argued that the managers were unwilling to recognize their "mistakes" and felt bound to give the earlier picks playing time regardless of their skill.

There has been a significant amount of research into the draft's effect on competitive balance. The invariance principle predicts the draft's effect: there should be no change in competitive balance. Grier and Tollison (1994), in contrast to the Rottenberg invariance principle, give empirical evidence that the NFL rookie draft's reverse order nature increases the success of underperforming teams in subsequent years. They discovered that the average lagged draft order had a detrimental effect on club winning rates. On the contrary, Fort (2003, pp. 242-6) uses data from the NFL and MLB to reveal the difference in the standard deviation of winning percentage (one of many measures used to judge competitive balance) before and after the draft is not statistically significant. In other words, the draft's adoption did not affect the competitive balance.

Caporale and Collier (2013) and Spurr (2000) discovered a relationship between draft pick and significant league playing time. The earlier a player was selected in the draft, the more likely he was to play in the big leagues. Burger and Walters' study (2009) examined the relationship between draft orders and financial compensation. The authors found that some team managers are "irrational" when they select lower-quality athletes because they did not modify signing bonuses appropriately to reflect the quality of the selections. Drafting is also a gamble to some extent. While teams are given a lot of data and videos as references, no teams can guarantee that the player they draft will play in the future with the corresponding ranking they had at the time of the draft (whether it is a high-ranked or low-ranked player). In general, higher

draft picks perform better than later picks, although there is much variation. According to Berri and Schmidt (2010), the selection order predicts just approximately 5% of NBA performance. For NBA teams, rookie contracts are usually profitable. According to Rosenbaum (2003), adopting rookie scales slashed first-round salaries in half. In addition to the studies mentioned above, Kathryn Johnston, Lou Farah, Harleen Ghuman, and Joseph Baker (2021) provide a clear review of the draft's effect studies through a systematic study.

Competitive Balance in Professional Leagues

North America

Baseball is a national pastime in the United States and is also popular in Japan, Korea, Mexico, Central America, and other countries. Baseball was born in England in 1700, and the rules of the modern version of the baseball game can be traced back to the Knickerbocker Club of New York, founded by Alexander Cartwright in 1842. By the middle of the 19th century, there were similar numbers to cricket clubs. Cricket is England's national pastime, and Americans want to develop their own "homegrown" sport. In 1876, William Hubert created a closed league for a fixed number of teams and granted them exclusive territories, which is the birth history of the National League. The National League became not only the template for all American professional leagues but also the model for creating leagues elsewhere in the world. The National Association, however, as the first professional baseball league, failed because specific teams dominated the league, such as the Boston Red Stocking won the championship in 4 out of 5 years. In order to maintain the league's financial stability, the National League (NL), which replaced the National Association, imposed regulations that limited competition among its members. The National League initially restricted the number of clubs to eight, with just one team allowed in each city. The reserve rule, which prohibited teams from bidding against one

another for the best players in the league, was implemented by the owners in 1879, just three years after the National League was founded. As time went by, MLB adopted additional rules, such as amateur player draft, revenue sharing, and the luxury tax, which the owners claimed were necessary to maintain competitive balance (Eckard, 2001b).

After President Richard M. Nixon signed revenue sharing into law, the National League of MLB introduced gate revenue sharing in 1876. After that, the owners enacted a reserve clause in 1879, claiming that doing so was important to preserve the league's competitive balance. The owner's meeting in 2000 marked the start of the new millennium, and the commissioner was given instructions to bring back the sport's competitive balance. The owners' demand for competitive balance was triggered by a burst in MLB's finances in the 1990s. Some MLB teams accumulated massive wealth through the construction of new stadiums or a meteoric rise in the price of local media contracts. The revenue gap expanded significantly because the money from these sources was not allocated equally among the clubs in the leagues. For example, the Yankees were the most profitable MLB team in 1990, earning $98 million overall, $64 million more than the Mariners, who finished last in revenue. With a startling $121 million higher than Montreal's league-low in 1999, the Braves took the top spot in MLB with total revenues of $169.5 million. Until now, the payroll difference in MLB is expanding. In 2020, the highest-spending teams spent 2.7 times as much as the least-spending teams.

The revenue imbalance among teams leads to the payroll imbalance, which is the difference in spending on playing talent between franchises. Owners need to spend on talent to win. In this case, payroll imbalance leads to competitive imbalance. The discrepancy in revenues became the centerpiece of the economics of baseball in the 1990s. Competitive balance is always one of the most important issues in sports leagues. According to studies, attendance increases

when game outcomes become less guaranteed. Knowles et al. (1992) and Rascher (1999) provided empirical evidence that individual baseball games positively correlate with the level of outcome uncertainty. Several studies demonstrate that MLB's competitive balance has improved over time. These studies explain their findings and quantify competitive balance in various ways. There are several measurements to testify to competitive balance. For example, the Gini coefficient can calculate the imbalance of revenue and payroll; the Ratio of Standard Deviations (RSD) of Win Percentages is the most common way to measure seasonal imbalance; Hirschman-Herfindahl Indices of pennant winners or last-place finishes to test competitiveness.

Before the 2000s, some scholars attributed the consistent improvement of competitive balance to implementing free agency. When comparing the winning percentage variance for the population of teams before and after free agency, Balfour and Porter (1991) found that the variance was lower during the free agency era (1977–89) than it was during the earlier period studied (1961-76). Some studies also show that during the post-free agency, the competitive balance in MLB has slightly improved (Fort & Maxcy, 2003; Quirk & Fort, 1992; Vrooman, 1996). Several structural changes in MLB have been hypothesized to influence the competitive balance between teams over time, including the draft (1965), the end of the reserve clause (1975), the free agency introduced immediately (1976), a significant change in local revenue brought on by rising local TV broadcast rights prices (the early 1980s), and the first luxury tax regulation was implemented after 1994 MLB player strike.

Scholars preferred to use "cross-section type" approaches to analyze the structural change in competitive balance. (Noll, 1988; Scully, 1989; Quirk and Fort, 1992; Fort and Quirk, 1995). Also, some scholars applied breakpoint detection to measure within-season MLB competitive balance (Andrews, 1993; Bai, 1997; Bai and Perron, 1998, 2003; Lee and Fort, 2005). However,

despite the methods scholars use to measure MLB's competitive balance, it is undeniable that it still faces a competitive imbalance problem right now. At the end of the 2019 season, MLB's top four winning records remain untouched: the Astros, Dodgers, Yankees, and Twins have all recorded 100+ winning seasons. In contrast, the Mariners, Tigers, and Royals had terrible seasons with fewer than 60 wins.

While competitive oligopolies are not uncommon in today's professional sports leagues, the phenomenon is particularly pronounced in baseball. According to scholars, we can find that MLB does not have a salary cap (soft salary cap); instead, they use a competitive balance tax (also known as luxury tax) to limit the financial advantage of big market teams. According to MLB.com, MLB's luxury tax keeps increasing, from $195 million in 2017 to $208 million in 2019. Unfortunately, these luxury taxes do not seem to be a substantial penalty for wealthy clubs: in 2019, the Cubs, Yankees, and Red Sox exceeded the luxury tax threshold.

Another point that affects MLB's competitive balance is the difficulty for clubs with limited resources to change the future of their teams through the draft. While MLB has a competitive balance draft to support smaller market clubs to gain an advantage in the draft better, for example, in the amateur draft, the first and second rounds are reserved for the smallest clubs in terms of revenue and market. However, it is difficult for these clubs to invest more in scouting or player development to find and develop talent. According to numerous studies on (aging curves in baseball), the prime age for baseball players appears to be between 26-28. In MLB, many amateur players are typically drafted between the ages of 18-22, so even though small market teams acquire great young talent, many poorer teams cannot keep players after they reach their peak because the developmental curve of players often doesn't immediately cash in on their talent. Once they reach their peak, they cannot keep them, and these players are snapped up by

teams that can afford to pay large salaries. Of course, while small-market teams are destined to face this dilemma, it is not impossible to find a solution. The Oakland A's are a classic case in point. As one of the league's most underappreciated small market teams at the time, they used data analytics to select players to sign. Such a data-driven format saved them much money while finding them the best players on the market.

Football appeared in American colleges and universities in the nineteenth century. In 1869, the first official intercollegiate competition was held between Rutgers University and Princeton University. This game uses rules that are closer to English football than modern American football, as players are not yet allowed to push the ball with their hands. At that time, because each university played differently, colleges planned to negotiate uniform rules. In 1880, the Intercollegiate Football Association (IFA) developed the rules for truly American football. It replaced the rugby scrum with a demarcated 'line of scrummage' (later renamed the 'line of scrimmage'). At the same time, it made a clear distinction between offensive and defensive teams. It was a big breakthrough in American football. However, the violence in this sport did not improve. In the 1905 season, it killed 18 people and seriously injured 159. President Roosevelt even warned the football representatives of Harvard, Princeton, and Yale, at the time that he would ban the game if they did not improve the violence of football. Thus, 13 schools established an agency to set the new rules and enforce them.

The Intercollegiate Athletic Association of the United States, later known as the National Collegiate Athletic Association (NCAA), was founded and quickly rose to become the main governing body for all major collegiate athletics in the country. Amateur athletic clubs made up of college graduates gave rise to professional football in the United States. Clubs eventually started using outside players in their competitive games with one another. William Heffelfinger,

a Yale graduate, was hired by the Allegheny Athletic Association to play in a match against the rival Pittsburgh Athletic Club in 1892, making him the first openly professional football player. More and more teams started to sign professional athletes, frequently luring them away from one another in the middle of the season. 11 teams agreed to pay $100 each (which none of them ever paid) to join the American Professional Football Association, which changed its name to the National Football League two years later out of frustration with the rising fees, during a meeting in a car dealership in Canton, Ohio.

Baseball was the source of a lot of the NFL's structure, including some of its bylaws. The NFL rapidly tried to develop monopoly power, much like MLB. The NFL developed monopoly power by banning new or current teams from locating in an established team's territory during a time when a team's revenue was decided by ticket sales. Football had a commissioner from the start, unlike baseball, which didn't designate one until the 1919 "Black Sox" gambling scandal. The acceptance of a strong central authority by each franchise distinguished the NFL from MLB and resulted in changes in the 1960s that aided football's expansion.

The NFL quickly surpassed MLB to become the most profitable professional league in North America over time. According to Forbes Magazine, the NFL's average operating revenue for 2005 was close to $32.5 million. This number far exceeded the MLB, NBA, and NHL at the time. The value of the NFL is also greatly increasing in 2021, an average value of an NFL franchise was worth $3.5 billion. Football, like the other major professional sports in the country, gets the majority of its money from three sources: ticket sales, TV broadcasting rights, and "venue revenue," which is money from sources associated with the facilities, like parking fees and signage (Michael Leeds, 2006).

The NFL's excellent competitive balance control is undoubtedly one of the factors that make it the most profitable in the North American professional sports league. The NFL has regularly had the largest real standard deviation of win percentages among American team sports leagues despite only having 16 regular-season games played each season (Szymanski, 2001). No team has ever won three straight Super Bowls, and there has been an incredibly low concentration of championships. To promote competitive balance, the NFL uses some regulations, including considerable revenue sharing (the home teams only keep 60% of their gate revenue), a hard salary cap, a reverse-order draft, and an unbalanced schedule. Because of these rules, the top-to-bottom team revenue ratio and top-to-bottom team payroll ratio are both limited to 1.9:1 and 1.5:1, respectively (Zimbalist, 2002).

Even though the NFL is one of the most profitable sports leagues, the players don't benefit from the success. NFL players earned the least on average ($1.4 million) among the "Major Four" leagues in 2004. Even though it had increased, the average NFL play in 2019 was still $3.26 million, less than even half of the NBA average. One of the reasons for this predicament in the NFL should be the system of the salary cap. After the Supreme Court ruling that the NFL was not exempt from the Sherman Antitrust Act, the NFL responded by eliminating the reserve clause and changing it with an equally illegal 'gentleman's agreement'. This agreement only last for a few years and was replaced by the 'Rozelle Rule'. The Rozelle Rule effectively transformed the signing of a 'free agent' into a trade but had an impact on players' salaries and brought lots of lawsuits. In the next few years, NFLPA tried to change it many times. In 1988, the NFLPA decided to decertify Rozelle Rule and used another restriction on the player, which is a salary cap. Some scholars are trying to analyze the impact of the salary cap on competitive balance in the NFL. Using the HHI measure, Larsen et al. (2006) discovered that the

salary cap's implementation in the NFL was correlated with an increase in league-wide competitive balance. Totty and Owens (2011), however, prefer the standard deviation measure for wins and find no evidence that salary caps improve competitive balance. There is no uniform conclusion as to whether the salary cap has a positive effect on the competitive balance of the NFL.

The NBA began as the Basketball Association of America in 1946. In 1949, they were merging with the National Basketball League changing its name to the National Basketball Association (NBA). Since the NBL and BBA combined, financial trouble had always been the biggest problem in their small market. During the 1954-55 season, they only had eight teams in the league. Fortunately, the league had an expansion boom, with 21 teams joining the league from 1946 to 2004. Some historians have called the NBA a league dominated by "teams of the era." Boston Celtics won 11 championships in 13 seasons from 1957 to 1969. LA Lakers have won 17 championships in NBA history. Michael Jordan's Chicago Bulls built a dynasty in the 1990s. They won 6 titles during the decade. The Golden State Warriors recently got four championships in 7 seasons. Such a phenomenon also reflects that the NBA does not maintain competitive balance very well.

Lots of scholars have found that the NBA lacks competitive balance at least as much as any other league (Rockerbie, 2016; Schmidt & Berri, 2003) and that it has tended to get worse over time (Quirk & Fort, 1997; Berri, Brook, Frick, Fenn, & Vicente Mayoral, 2005; Fort & Lee, 2007). The statistics back up the claims regarding the competitive imbalance in the NBA. For instance, the NBA only had nine franchises win the 32 possible NBA titles from 1980 to 2012, when Magic Johnson and Larry Bird joined the league. The distribution of championships has been far more equitable in the other major North American sports leagues. From 1980 to 2012,

15 different teams won the NHL and NFL championships, while 20 different baseball teams won the World Series. The standard deviation of winning % is compared to the standard deviation we would see in a balanced league in Roger Noll and Gerald Scully's measure of competitive balance. According to the test, the NBA's ratio was 2.35 31 years before 1980 and increased to 2.81 from 1980 to 2012. (A value of 1.0 indicates a balanced league). After 1980, the NHL, NL, AL, and NFL balance improved. The only league that experienced an increase in imbalance was the NBA. Rockerbie (2014) also shows that the NBA's competitive imbalances have been worse than other leagues since 1980.

The question is, what makes the NBA so imbalanced? Surprisingly, the biologist, Stephen Jay Gould, contributed to the solution to this problem. He argues that the capacity of the greatest players in a league to stand out from their peers or perform at a much above-average level would decline if the population were large enough. Schmidt and Berri (2003) further proved this hypothesis by exploring the correlation between the distribution of wins in MLB and the rate at which teams in the league hired foreign talent. Berri et al. (2005) found that the NBA suffers from an "insufficient supply of tall people." Due to the characteristics of basketball itself, tall and physically solid quality is essential for the team to select players. The average height of NBA players exceeds that of MLB, NFL, and NHL. This also leads to the fact that the primary population of NBA players is relatively small, a persistent problem that has always existed in the NBA labor market.

NBA has tried to improve the league's competitive imbalance. In 1983, the league was the first to institute a salary cap on team payrolls, and this cap is not binding. For example, under the Larry Bird exemption, a team could re-sign its players for any salary the team and the player agreed, even if the salary took the team over the cap on payrolls. Moreover, to combat the soft

nature of the salary cap, the 1999 collective bargaining agreement (CBA) instituted the first cap in professional North American team sports on individual player salaries. The NBA can take whatever actions it sees fit to distribute its talent more fairly, but there will still be inequalities on the playing field due to the scarcity of talents. Finding the unique player who can change a losing team into a winning one, like Bill Russell, Magic Johnson, or Michael Jordan, is essential because of the NBA's wide talent dispersion. As a result, the NBA implemented the reverse-order-of-finish draft. Some poor teams have an incentive to lose as many games as possible to better their draft position and secure the one player who can lift the team from the bottom of the league because the difference between the top picks can be rather significant. Naturally, this intentional loss is detrimental to the league and against the sport's rules. The NBA instituted a draft lottery in 1985 to eliminate this incentive. Taylor and Trogdon (2002) looked into how the incentive to lose affected the behavior of the NBA teams. According to the evidence, play-off and non-play-off teams behaved nearly identically once the lottery was introduced.

Today's top ice hockey league is the National Hockey League (NHL), founded in 1917. It only had Canadian teams for the first seven years. The league expanded to six teams in 1942 and included clubs from the United States and Canada. Under pressure from their rival league, the World Hockey Association, the NHL expanded to 16 clubs during these "golden years," which continued for another 25 years (WHA). The NHL continued to grow during the whole 1990s, reaching its current size of 32 teams. After the owners went on strike in the 1994–1995 season, they agreed to a CBA that permitted players to become free agents at 31. However, the agreement also prevented the birth of the salary cap and luxury tax. The NHL commissioner finally agreed to the new CBA after canceling the 2004–05 season. New pay limitations apply to players. For instance, the adoption of salary caps and lower limitations, reducing all wage

contracts by 24%, etc. Compared to the other major leagues in North America, the NHL is a closed league without a promotion and relegation system. Professional hockey in North America is organized under the 'farm' system, like the American Hockey League (AHL). Most AHL players are employees of their respective NHL teams; either they were selected in the draft or signed upon scout recommendations. NHL players have all been from Canada for a very long period. Up until the 1970s, this league saw an increase in the number of players from the United States and other nations. More than 20% of NHL players are from the United States.

For the two dispersion measures related to revenue imbalance and payroll imbalance, see Lavoie (2006). He concludes that the payroll and income imbalances did deteriorate due to compensation and revenue inflation, which started in the 1990s. Richardson (2000) likewise concludes that there has been a decrease in the competitive imbalance over time-based on a similar analysis of playoff results from the 1980s and 1990s. Yokd and Miree (2018) cite 'A tragedy of the commons' to describe NHL contract negotiations. Three competing interests are at the core of contract negotiations within the NHL: the owners' desire to ensure the financial success of their teams; the players' desire to earn as much money as possible, given the risk and transient nature of their careers (Fournier and Roux, 2009); and the league's interest in boosting the sport's exposure and fan participation (via ticket sales, television watching, etc.).The NHL has used a variety of approaches in recent years to draw in more fans and raise overall sports awareness, including advertising campaigns, "turning a blind eye" to fighting, and enhancing team performance (Paul et al., 2013). The creation of the NHL's competitive balance and the effects of various labor agreements or other institutional arrangements, such as the CBA (Fenn et al., 2005), free agency and draft rules (Richardson, 2000), and team playoff success (Longley and Lacey, 2012), have been established in the literature (Vrooman, 2009; Fort and Lee, 2007).

Europe

Soccer is the sport with the largest fan market and the largest economic impact in Europe (to distinguish it from American football, it will be referred to as soccer). The European soccer market has grown substantially in the last two decades. In order to better review the competitive balance of European sports leagues, this article will focus on the ‘big five' European soccer leagues, namely, the English Premier League, French Ligue 1, German Bundesliga, Italian Serie A and Spanish La Liga. The following section will introduce the basic history of Europe football and answer the following questions: how do they perceive the concept of competitive balance? What are the policies they use to achieve competitive balance? What problems do they have?

The earliest soccer record in history comes from Tsu' Chu in the 200 B.C. period in China. Other versions of the sport have appeared in Japan and Greece, but FIFA (2016b) credits England with giving the sport a formal structure in the 1800s. Initially, soccer did not have clear and uniform rules in England. Different organizations used different rules and blurred the rules of soccer and rugby. It wasn't until 1863 that the Football Association (F.A.) was created to standardize the rules of football and distinguish the two sports from each other. From then on, soccer rapidly expanded from England to the rest of Europe, in chronological order, Scotland (1873), Wales (1875), Ireland (1880), Netherlands and Denmark (1889), Argentina (1893), Italy (1898), Uruguay (1990), and Germany (1990) all established their leagues one after another as more and more national associations began to develop all over Europe and the rest of the world.

In 1904 the Fédération Internationale de Football Association (FIFA) was founded in Paris, France (FIFA, 2016b). FIFA was established to bring these associations together. The association, which identified itself as the world's governing body of football, sought to clear the rules of the game and provide international games and competitions with a more formal

framework. The FIFA World Cup was born because the FIFA president, Jules Rimet, provided soccer with its own championship event. By now, the World Cup has become the world's premier event, and more than one billion people watched the 2014 World Cup finals in Brazil. In addition to the high level of interest from fans, sponsors also have a strong interest in soccer. In the 2014 World Cup, sponsors contributed $1.6 billion. During the 2011–2014 budgetary period, FIFA had close to 5.7 billion in total income. They have been very successful in generating revenue. In addition to the stadium's revenue of tickets and merchandise, these leagues also have a lot of sponsorship, T.V. broadcasting revenue, and other commercial income. For example, in the 2012-13 season, the EPL's commercial revenue rose by $990 million. In the 2017-18 to 2018-19 season, EPL's T.V. broadcasting revenue brought them $7.3 billion (this includes domestic and international).

The main difference between UEFA and North American professional sports leagues is that they use a system of promotion and relegation, and clubs do not operate in a closed league structure. Clubs in the European Football League have a powerful sense of crisis, and they have to ensure enough wins during the season to stay in the top league, to gain more interest and fan attention. So European soccer club owners are very concerned about policies that adversely affect their clubs' competition, such as revenue sharing, which is widely used in North America and is strongly resisted by traditional top European clubs (Thomas, Duckworth, & Gonzalez, 2015; UEFÀ, 2015b). According to many studies, it is not difficult to understand that European clubs are closer to the goal of winning maximization (Garcia-del-Barrio & Szymanski, 2009; Késenne, 1996, 2000; Sloane, 1976).

Over the years, many scholars have attempted to analyze and evaluate the competitive balance of various European soccer clubs (Michie & Oughton, 2004; Inan & Kaya, 2011;

Mourão & Cima, 2015, etc.). In this extensive area, several analyses or reviews can well summarize the development of the competitive balance in European soccer. Initially, the seasonal measures were mainstreamed to evaluate European soccer leagues (Quirk & Fort, 1992). For example, the standard deviation of the winning percentage was adapted into the point structure to evaluate team performance over time. At the same time, RSD has also been used to study the winning percentage of leagues (Buzzacchi et al., 2003). Later, Feddersen and Maenning (2005) concluded that seasonal measures are difficult to detect clear trends in the competitive balance. Thus, in 2003, Buzzacchi et al. introduced a "dynamic" measure of competitive balance, which figured out that the EPL and Serie A were more competitive imbalances than the MLB, NFL, and NHL. In the end, Buzzacchi et al. (2003) 's analysis' findings helped to illuminate a paradox: the underlying differences in European soccer were not shown by the usual, more static metrics of seasonal competitive balance. Because they found out only a few clubs can enter to top-five positions in history, while lots of clubs have a similar spread of winning percentages each season. For example, In Serie A, 18 out of the expected 94 clubs have entered the top five from 1961 to1999. As such, Michie and Oughton (2004) started to use variations of the five-club concentration ratio (C5) and the HHI to measure the dominance of certain clubs and the inequalities between the top teams and other teams. In this way, the dominance of the top clubs was revealed: between 1947 and 1987, the balance of competition remained largely unchanged in the ‘big five’ leagues. Other scholars used a similar way and found that the competitive imbalance increased between 1998 and 2008 (Curran et al., 2009; Brandes and Franck, 2007).

The salary cap was widely used in North American professional sports leagues but was abolished in European soccer after only about 60 years of existence (1901-1961). Since then, the

English Football League has gradually become an unbalanced league dominated by top clubs. Even in modern European soccer, various types of monopoly are still the norm, such as oligopoly, duopoly, or quadrupole. According to Pifer's (2018) statistics on the number of "Big Five" championships from 1992-1993 to 2016-2017, it can be seen that most of the league's championships are only distributed among a few clubs. For example, the champions of the EPL, La Liga, Bundesliga, and Serie A, have each only featured in no more than six different clubs in their respective leagues. Even Ligue 1, where titles are more evenly distributed, only has ten different clubs that have won titles.

In studying the competitive balance in European football, it is essential to consider the financial situation of clubs. There are two basic statistical correlations in soccer (Michie & Oughton, 2004; Szymanski, 2015). The first is that a club will be more successful on the field the more money it invests in players. Tomkins et al. (2010) discovered that the team with the highest "XI" (i.e., the costliest starting eleven as measured by the sum of each player's transfer fee) won 10 of the 18 titles during that period after analyzing transfer data from the 1992–1993 through 2009–2010 EPL seasons. The second is that good teams make more money than their less profitable rivals. Success on the field - e.g., high ranking in the league, winning the championship - can attract more spectators, sponsors, etc., increasing revenue (on and off the field). Therefore, clubs at the league's top get more revenue and thus have more resources to invest in building their teams. Conversely, those teams with poor records are stuck in a vicious cycle of losing support and revenue due to poor stadium performance and thus have less money to invest in players (Michie and Oughton, 2004).

In achieving a better competitive balance and labor market, the Bosman case became the turning point that by outlawing the usage of quotas that restricted the amount of foreign and

European players permitted on a team and abolishing transfer fees for out-of-contract players, this case altered the market for playing talent within European soccer. The Bosman judgment significantly increased the pool of available workers for European soccer teams by allowing them the freedom to seek the best playing potential in several external regions. The "big five" become more international in the post-Bosman era (Poli, Ravenel, & Besson, 2016a). Logically, as a result of the increased supply of talented players from all over the world brought about by the opening of the labor market, the cost of a single unit of talent decreased, increasing the competitive balance among the "big five" (Flores, Forrest, & Tena, 2010; Kesenne, 2007). After the Bosman case, the "reserve clause" that required teams to pay a transfer fee for an out-of-contract player was canceled, limiting small-market teams' ability to keep their key players. Research shows that the Bosman case had no impact on the "Big Five's competitive balance (Binder & Findlay, 2012; Flores et al., 2010; Haan, Koning, & Van Witteloostuijn, 2007; Kesenne, 2007).

Although revenues in European soccer have been increasing, the vast majority of clubs have not been able to break even. In the five years from 2006 to 2011, the net losses of 734 clubs shot up by 760% (Frank and Lang, 2013). At the same time, a large number of clubs engaged in a destructive "arms race" through "financial doping" driven by the desire to winning maximization (Frank, 2010; Muller et al.). Since the turn of the millennium, the competitive balance within each of Europe's top five leagues has been decreasing, corresponding with the enormous gains in Champions League prize money (Curran et al., 2009; Pawlowski et al., 2010; Lee and Fort, 2012). Against this background, UEFA's Financial Fair Play (FFP) was introduced into European soccer in 2010 to enable clubs to balance their expenses and revenues.

The debate on FFP has also emerged. Grey (2011) argues that FFP has at least helped to

change the precarious financial situation of European soccer by bringing better discipline and management. At the same time, it has been argued that it has had a negative impact on the competitive balance of European soccer (Lindholm, 2010; Sass, 2014; Szymanski, 2014; Budzinski & Szymanski, 2015; Szymanski, 2015). There are two mechanisms in the FFP regulation: the no late payment due rule and the break-even rule (Peeters & Szymanski, 2014). Break-even works similarly to a salary cap in that each club is limited by the size and potential of the local market, making it difficult for clubs in smaller markets to compete (Lindholm, 2010; Sass, 2012).

In addition to the extensive discussion, a large number of scholars have attempted to verify whether FFP negatively affects the competitive balance of the league by measuring the competitive balance (Sass, 2016; Freestone & Manoli, 2017; Plumley et al., 2018; Garcia-del-Barrio, 2020) Unfortunately, until now, there is no accurate evidence to verify the relationship between FFP and competitive balance. Among them, there is a viewpoint that I think is emblematic of how European soccer views competitive balance. The two biggest problems in European soccer are competitive imbalance and unproblematic financial position, and the maintenance of financial balance may outweigh the desire for competitive balance (Andreyev, 2011). Therefore, even though FFP would further exacerbate competitive imbalance, European soccer still desperately needs interventions like FFP to improve the worsening financial woes (Freestone & Manoli, 2017).

China

Since the 1950s, Chinese athletic sports have been planned in a unified manner through the national system to make some sports superior and gain a place in the world athletic sports. However, as China's political, economic and social environment has changed, problems have

gradually emerged in sports that rely entirely on the country to develop competitive sports. At the end of the twentieth century, various industries in China began to reform, and sports reform was among them. Soccer, as a breakthrough in China's sports reform, took the lead in professionalization, and in April 1994, the Chinese Football First Division A League (C League) opened, marking the official start of professional sports in China. Basketball, volleyball, table tennis and other sports also implemented professional leagues with home and away systems one after another.

Chinese Basketball Association (CBA). In 1995, the Chinese Basketball Association (CBA) officially started. It needs to be added that the Chinese Basketball Association represents not only the management organization of Chinese basketball but also the league of Chinese basketball. Although the English name is the same, it represents two different means. As China's top professional basketball league, the CBA has 20 teams divided into South and North divisions. The CBA has established preseason, regular season, and playoffs. The regular season of the 2020-2021 season consists of 56 rounds. The top 12 teams enter the playoffs, of which the top four teams directly enter the top 8, and the teams ranked 5-12 compete for the four top eight positions. Higher seeds against lower seeds. The quarter-finals are best-of-five, and the semi-finals and finals are best-of-seven. Although the CBA currently does not have a rival league of the same level in China, a second-level professional league under the CBA: the National Basketball League (NBL), was established in 1996. For the 2021 season, the NBL has 14 teams participating. As China's only summer professional basketball league, it follows a European model of promotion and relegation.

CBA adopts the North American closed league model like the NBA, but the talent training systems of the CBA and the NBA are different. In the NBA, players are developed

through a system of high school teams, Amateur Athletic Unions (AAUs), college teams, and even the draft to attract top talents worldwide. For example, in the 2022 NBA draft, 58 players were selected, including 20 international players (NBA.com). However, most of the Chinese players of CBA come from the club's youth teams and sports schools. Basketball talents are still very scarce in the CBA. China is also constantly trying different methods to cultivate basketball talents. For example, the "National Basketball Eagles Program" is actively sending young talents to American high school or college basketball for training. At the same time, CBA has also gradually paid attention to young players trained by college sports. The Chinese University Basketball Association (CUBA) is China's top amateur basketball event. The league was established in 1998 to imitate the National Collegiate Athletic Association (NCAA) basketball system in the United States and cultivate and deliver basketball talents for the CBA.

In 2015, the CBA officially introduced the draft system, imitating the NBA's Reverse order draft system, lottery, and so on. Statistically, the CBA draft is evolving, with only 20 participants and one selected in 2015 to 87 and 30 selected in 2021 (cbaleague.com). Next is the draft system for foreign players. the CBA's restrictions on foreign players are constantly being adjusted, but overall, the number of times and minutes foreign players can play is gradually being relaxed. In 1995, the basketball association allowed each club to register two foreign players, limiting the number to one foreign player in a quarter. In the 2008-2009 season, the foreign aid picking system was abolished, and there were no more restrictions on the playing time of foreign aid. In the 2015-2016 season, the league began to compress the playing time and number of foreign players, and no two foreign players could be used in the last quarter. Yan (2013) studied the effect of foreign player introduction on the competitive balance of the CBA from 1995-2012 and found that competition tended to balance as the number of foreign players

increased. The CBA competition system is constantly changing, for example, the CBA's North-South division system has gone through the process of elimination-reinstatement-elimination. Zhang (2016) has combed through the changes between 2005 and 2015.

There are clubs of different natures in the CBA league, resulting in unclear ownership of clubs and ambiguous management systems, affecting the normal operation of the clubs. At the same time, the different governing units of the clubs will also affect the investment and use of their funds. For example, the source of funds for Beijing Shougang Club is a corporate investment because its supervisory unit is Beijing Shougang Group, a state-owned enterprise. In contrast, Guangdong Hongyuan Club is funded by private enterprises, and the budget is divided by the Guangdong Hongyuan Group.

CBA's player salaries are not fully disclosed now. According to the official introduction of the salary cap by CBA in the 2020-2021 season, the upper limit of the team's initial salary cap is 48 million yuan, and the lower limit is 24 million yuan. It can be seen that the salary of CBA is not low. According to a report released by Chinese media HoopsChina, the average salary of the CBA has reached 3 million yuan, far exceeding that of other top basketball leagues in Asia. Compared to the NBA, the CBA does not have a monopoly nature and cannot rely on the market monopoly to gain economic benefits. The club mainly relies on investment and ticket income. While the benefit from TV broadcasting rights fees is minimal, it does not have the right to benefit-sharing. Revenue sharing does not protect the clubs with a lower level of competition and poorer economic market.

After looking through the literature on the competitive balance of the CBA, most Chinese scholars have studied the competitive balance of the CBA only from a mathematical statistics perspective. The common methods are the actualized standard deviation of win percent (ASD), the

idealized standard deviation of win percent (ISD), the relative standard deviation of win percent (RSD), and the Herfindahl-Hirschman Index (HHI), Competitive Balance Ratio (CBR)and Top K Ranking to assess the competitive balance of the league (Bai, 2012; He, 2005; He, Zhang, and Wu, 2009; Huang, 2007; Sun, Du, Wang, and Yang, 2010; Yan, 2013; Du et al., 2018). Jia Xu et al. (2018) pointed out that there are more problems in the research methods of Chinese scholars on the competitive balance, such as national pride is a factor that cannot be ignored but is challenging to study quantitatively. At the same time, a large number of empirical studies on competitive balance in Chinese professional basketball leagues have focused on comparative studies between China and the United States.

Regarding the analysis of the reasons for the state of competitive balance in the CBA, Du et al. (2018) concluded that the quality of player mobility in the CBA is too low. Even though it has a draft and transfer system, the number of players drafted into the CBA each year is low and the gap between the competitive strength of rookies and current professional players is large, and few domestic players actually move through transfers and trades. In addition, the increase from 12 teams at the creation of the CBA to the current teams expanding too rapidly has also resulted in reducing the competitive balance of the league (Du et al., 2018). The revenue sharing system is unreasonable. the revenue of CBA clubs is registered by the basketball association share, sponsorship (including government and corporate) and box office. The share of the basketball association is "egalitarian", which leads to the poor economic performance of the teams with high capital investment, while the teams with poor performance have good economic status. Because it is a closed league, there is no risk of relegation and teams do not have the primary goal of maximizing wins.

Summary

Yan and Yang (2016) propose suggestions that may be useful for further understanding the issues of competitive balance research in professional sports leagues in China. They argue that the current definition of competitive balance in professional sports leagues is not clear enough. Second, the use of measurement methods is unreasonable and should be combined with the actual situation of professional sports in China. Most professional sports clubs in China do not have clear property rights and are not professional sports leagues in the real sense, and many of the current methods of measuring the competitive balance of professional sports leagues in China come from the professional sports leagues in the western capitalist market, so there are limitations in using these methods directly. Third, competitive performance is not the same as the overall strength of a club, and the overall competitive strength of a club should be evaluated from multiple perspectives; Yan and Yang (2016) encourage researchers to explore the practical guidance of competitive balance for professional sports leagues more in the context of the development of professional sports in China.

CHAPTER 3

METHODOLOGY

In this exploratory qualitative study of investigation of the current state of competitive balance in the CBA, data were collected by semi-structured interviews with team-level managers or coaches in the CBA and legal experts or scholars who are not worked for CBA. Miles, et al. (2014) think that qualitative data is appropriate with locating the meaning people make of events, processes, and structures in their lives. Such a research philosophy is considered to be interpretive constructivism within the naturalistic paradigm, which is the philosophy framework of this study. As one of the variants in grounded theory, constructing grounded theory conducts research based precisely on matching philosophical perspectives, which also ensures that the core foundations of the study are methodologically consistent (Charmaz, 2006; Holt & Tamminen, 2010b). Open, axial, and selective coding in grounded theory was used for data reduction and analysis, which included constant comparative analysis. The goal of this study was to understand the necessity and significance of applying competitive balance in the CBA, identify administrative obstacles that constraint the direct applications of a widely-considered prudent concept that is established mainly in the U.S., discuss critical issues to be ironed out for the effective implementation of viable competitive balance principles.

Participants

Recruitment of participants was used a purposive sampling method to select the interview sample. Per to Daniel (2012), purposive or purposeful sampling. is a non-probability sampling technique that involves the selective selection of sample elements from a population based on

specific inclusion and exclusion criteria, in order to suit the purposes of the study. A sample of team-level management and coaches was selected since they have most relevant experience in tournament management, tournament operations and tournament research. Meanwhile, we will cover as many different teams in the league as possible to ensure sufficient sample information, the credibility of the study and the reliability of the results. Legal experts or scholars is also based on a purposive sampling method to select. They have a rich knowledge base about the CBA and are not employed by the league. This may offer a fresh, unbiased viewpoint on a CBA. The recruitment of the participants in this study involved making appointments with the potential participants via e-mail with information found on team websites or official social media account.

Data Collection

Data for the study was collected using semi-structured, mostly online interviews were supplemented by data from team-level managements or coaches, legal experts or scholars, and document examinations. The pace of data collection was slower than anticipated, primarily due to the researcher's initial over-optimism in participant recruitment. Some potential respondents declined to participate due to concerns about the sensitivity of their identity, while in other cases, the data provided by selected respondents did not meet the expected level of project-related detail, requiring additional respondents to be recruited.

Interviews

Rubin and Rubin (2012) suggest that qualitative interviews yield highly reliable results. The data for this study will be collected by semi-structured interview which is characterized by the researcher preparing a certain number of questions in advance, and through the in-depth conversation between the researcher and the interviewee, the researcher asks open-ended questions and decides the sequence and the wording of questions. This study interviewed two

team-level managers or coaches who are currently working for CBA teams, and three sports legal experts or scholars who are not officially affiliated with the league. This number was determined when no new categories upon which the theory was built were no longer producing new insight, which is based on the grounded theory criterion of theoretical saturation (Corbin & Strauss, 2008; Holt & Tamminen, 2010a; Strauss & Corbin, 1998; Weed, 2009). Due to geographic constraints, all interviews will be conducted via telephone or online video conference. The interview process will be described in detail in the next section.

Two managers or coaches working for CBA and three legal experts or scholars not working for CBA were recruited via email. A new invitation for managers or coaches to participate in the study can be found in Appendix A. Meanwhile, the letter asking legal experts or scholars to participate can be found in Appendix B. Once participants agreed to participate, a time was scheduled to conduct the interviews, and participants were provided with research information and consent forms, found in Appendix C and Appendix D. Interviews will be recorded using audio recording equipment, and after the interviews are completed, audio files will be uploaded to the researcher's computer for transcription and analysis. The questions and format of the interview will be designed according to the guidelines of Charmaz (2006), Rubin and Rubin (2012). To further enhance credibility, the transcription files will be sent back to the participants after completion of transcription to confirm whether there is any deviation in the expression of the content.

The initial questions are specific and aim to obtain basic information about the participants, such as work background, and will eventually move to a more open dialogue. In all interviews, we maintained the same procedure. First, permission was requested to record the interactions; second, the main objectives of the interviews were highlighted to the participants;

and finally, the participants were informed of the main areas of analysis. All interviews were conducted in an individual format. The interviews were conducted in Mandarin. The duration of each interview ranged from 30-60 minutes. All interviewees were given as much time as they needed to develop, clarify or rephrase their ideas.

For team managers or coaches, the following information is first collected: gender, age, race, education, city of origin, job level/title, number of years in sports, number of years in the CBA, and other positions held. For legal experts or scholars, the following information is first collected: gender, age, race, education, job level/title, number of years in sports, and research field. After obtaining the basic information, the interview turned to open-ended questions about what the competitive balance meant, whether competitive balance existed in the CBA, if so, what the organization was currently doing to maintain competitive balance, if not, why the organization did not have competitive balance, and what he or she thought the next step should be to improve competitive balance in the CBA. Appendix E shows the complete list of interview questions for CBA managers or coaches. Appendix F shows the complete list of interview questions for legal experts or scholars. Everyone was asked some standard questions, but depending on the participants' answers, the follow-up questions were not the same for them.

Document Examination

The examination of documents is an important research tool in triangulation in which documents are analyzed by the researcher to give meaning to the phenomenon (Bowen, 2009). There are generally three types of documents (O'Leary, 2014): Public records, personal documents, and physical evidence. In this study, social media posts that are related to the advertising of a rivalry game or how a game or the league is going to be competitive will be documents we are going to collect as data. Due to internet security restriction by Chinese

government, most international mainstream social medias, such as YouTube, Instagram, and Twitter, are inaccessible. In this case, local social medias become mainstream internet platforms for Chinese customers (Li et al., 2017). Among this huge potential market, Weibo has become one of the most closely connected social media with Chinese sports organizations. There are more than 1200 official sports organizations were using Weibo in 2015 (Favorito, 2015).

In order to get the enough number of posts, we chose all CBA teams, which has 20, as a sample to analyze. The social media posts collection period from the official announcement of the CBA's reinstatement of the home-and-guest system (February 18, 2023) to the end of the 2022-2023 regular season (April 8, 2023) (Rui, 2023). Weibo posts containing teams' promotional games posts, league posts related to the competition, or advertisements related to competitive games in 20 teams. Information such as postdate, likes, comments and titles are recorded. Any post with no competition in the image, tag, or content were not recorded.

The choosing criteria for the posts were as follows: a) Simultaneous mention of the team's own name and other team names; b) Mention of match results; and c) Mention of vocabulary related to the intensity of the match. A total of 746 posts were reviewed. In many cases, the documents were imbalanced, with ample details provided for some events while others had very few details. However, the documents also provided additional clues that were not included in the interview guide. The list of teams and associated information is presented in Appendix G.

Data Analysis

In this study, data analysis uses the grounded theory method (Charmaz, 2006). What follow is the description of the methods and procedures used in analyzing the data. The analysis of interview transcripts and memos was based on the inductive analysis identify and describe

patterns, themes, categories, and connections within the data (Patton, 2002; Goetz & LeCompte, 1984; Roulston, 2010). Inductive analysis is the overarching approach in grounded theory. It involves starting with raw data and developing theories and concepts from that data.

"A grounded theory is one that is inductively derived from the study of the phenomenon it represents" (Strauss & Corbin, 1990, p. 23). Furthermore, a constructivist-interpretive paradigm (Denzin & Lincoln, 1994) supports this study. According to this approach, the researcher's interpretation of situations involving the competitive balance of Chinese Basketball Association provided the foundation for theory construction.

The process of data collection and analysis in grounded theory is described as being linked by Strauss and Corbin (1998). Therefore, the direction of the second interview is frequently influenced by the analysis of the information from the first interview. Although it is not possible to transcribe and code each interview before the next one begins, important concepts that emerge from the interviewer's audio files will be recorded during the interview. After the interviews, each transcript will be guaranteed to be read multiple times for "formal analysis" to develop an understanding of the overall context of the data. The focus will then shift to the three levels of coding: open coding, axial coding, and selective coding.

Using open coding, concepts in a text are identified, and categories are created to express the meaning of these textual fragments in terms of their attributes and dimensions (Corbin & Strauss, 2008; Strauss & Corbin, 1998). The process of categories created in open coding is refined into an interpretation of (competitive balance). Secondly, initial codes were examined in order to organize ideas and pinpoint concepts that seem to cluster together. Axial coding will be used to link categories, formulate attributes and dimensions of categories, and reassemble the data into a coherent whole (Strauss & Corbin, 1998). In performing axial coding, Strauss and

Corbin (1988, p. 128) use a set of scientific terms 'a) conditions, the circumstances or situations that form the structure of the studied phenomena; b) actions/interactions, participants' routine or strategic responses to issues, events, or problems; and c) consequences, outcomes of actions/interactions.' Conditions can answer questions such as why, where, and when. Actions/interactions can answer the question of by whom and how. The consequences can answer the question of 'what happens' as a result of the actions/interactions. At the third level of selective coding, codes were developed by merging and synthesizing level II codes to form theoretical constructs, or sub-themes. These sub-themes were constructed by extracting abstracted evidence from the data. When the core category of emerging themes is distilled, the analysis continues until "theoretical saturation" is reached, which is defined as the point at which new data no longer generates new ideas about the developing theory, marking the end of the coding process (Beck, 1993, pp. 43-44).

Throughout the process of data collection and analysis, memos will be important analytical tools that help document the entire development of theory understanding, interpretation, and linkage (Corbin & Strauss, 2008; Strauss & Corbin, 1998). The memos will also guide selective coding to help explain the relationships between categories and form a larger theoretical framework (Corbin & Strauss, 2008; Strauss & Corbin, 1998). At the same time, the constant comparison method will be used throughout the process as one of the core elements of the grounded theory (Holt & Tamminen, 2010a; Weed, 2009). The constant comparative method includes comparison of similarities, variations, and differences between events and events in interviews; comparison of concepts with concepts; and comparison of relationships with relationships (Holt & Tamminen, 2010a; Weed, 2009). To ensure methodological rigor, we strive to maintain objectivity and reflect on bias throughout the study. Finally, during the data analysis,

adequate attention was given to translation issues as participants spoke Mandarin. Researchers will try to preserve the original words or relay the meaning of the participants' words as much as possible when transcribing the interviews.

Trustworthiness

In the interpretive paradigm of qualitative research, researchers prioritize trustworthiness over the conventional criteria of internal and external validity, reliability, and objectivity typically associated with positivism (Denzin & Lincoln, 1994; Lincoln & Guba, 1985; Padgett, 1998). There are four factors that contribute to establishing trustworthiness in qualitative research: credibility, transferability, dependability, and confirmability (Denzin & Lincoln, 1994).

Credibility, which pertains to the level of confidence that can be attributed to the veracity of the findings and can be ascertained through diverse means. In this study, triangulation will be used. According to Eisner (1991, p. 110), triangulation helps researchers provide an ‘a confluence of evidence that breeds credibility.’ In order to develop a comprehensive understanding of phenomena, this study will use three different sources to ferreted out data: a) interviews with the CBA team-level managers or coaches; b) interviews with legal experts or scholars who have an understanding of CBA, but who are not officially affiliated with the league; c) examining documents such as marketing materials or social media posts that are related to the advertising of a rivalry game, or some sort of marketing related to advertising how a game or the league is going to be competitive. By triangulating data, the researcher will prevent the accusation that a study’s funding simply relies on a single source, a single method, or a single investigator’s bias (Patton, 1990).

Transferability means that other researchers can apply the findings of this study to their own. This study attempted to describe the findings with “rich and thick” terms (Glesne, 2006).

Confirmability is the internal coherence of the data in connection to the results, interpretations, and recommendations, whereas dependability is the stability of the findings over time (Denzin & Lincoln, 1994).

CHAPTER 4

RESULTS

The focus of the study was competitive balance in Chinese Basketball Association. Table 1 shows the general demographic characteristics of the participants, and Table 2 shows the categories and definitions of document examination of social media posts, and Table 3, 4, 5 indicate the results of three-level coding process of semi-structure interview. The findings of the study are based on 5 participants who included team-level managements or coaches, and legal experts or scholars who have deep understanding of CBA but not affiliated with the league.

Table 1. Demographic Characteristics of Participants

Anonymity	Sex	Age	Nation	Years Sport	Category	Education Level
A	M	40+	Local	10	Expert	Ph.D.
B	M	30+	Local	10	Expert	Ph.D.
C	M	30+	Local	7	Coach	Master
D	M	30+	Local	8	Management/Expert	Ph.D.
E	M	40+	Local	15	Management	Bachelor

Table 2. Categories and Definitions of Social Media Posts

Category	Definition
Game Preview	A type of information released in advance of a sporting event to provide spectators, fans and the media with information and details about the upcoming game.

Game Result	A type of information that reflects the wins, losses, scores and related data of the participating teams or players in the competition.
Entertaining	A type of information that depicts the intensity of the game and boosts fan motivation through entertaining language or emojis

Explanation of Social Media Posts

The collection period for social media posts in this study extended from the official announcement of the CBA's reinstatement of the home-and-guest system on February 18, 2023, until the conclusion of the 2022-2023 regular season on April 8, 2023. The aim was to collect posts that featured promotional content of posts related to the competition, and advertisements associated with competitive matches across the 20 teams. Only posts containing references to actual competitions in their images, tags, or content were recorded and included in the analysis. Refer to the study by Mastromartino and Naraine (2021) on social media content, this study also adopted three types of posts, as shown in Table 2. The first type, known as "Game Preview," refers to information released prior to a sporting event to provide spectators, fans, and the media with details and insights about the upcoming game. Typically, these posts include the date, time, and location of the game, the teams involved, and basic information about the participating players. The purpose of this type is to attract audience attention and help them gain understanding of the forthcoming match. The next type is "Game Result," which primarily focuses on reporting the outcomes, scores, and related data of the participating teams or players in the competition. The third type, referred to as "Entertaining," aims to bring joy to the fans or intensify the excitement of the game. Such posts are often expressed through humorous quotes, emojis, and other engaging elements.

Based on the aforementioned categorization, among the 746 Weibo posts analyzed, 238 posts (32%) were classified as "Game Preview," 423 posts (57%) were classified as "Game

Result," and 85 posts (11%) were classified as "Entertainment." In this study, the number of likes, comments, and forwards is referred to as the LCF. Through observation of the LCF, it was found that posts related to 'Game Results' generally garnered more attention from followers. Additionally, posts highlighting victories received more likes, comments, or forwards compared to posts associated with losses. Specifically, posts featuring overtime victories or consecutive wins attracted the highest level of attention. The magnitude of the LCF data is closely related to the number of followers of the respective accounts. Based on statistics, there were four teams with followers under 100,000, eleven teams with 100,000 to 300,000 followers, two teams with 300,000 to 500,000 followers, and four teams with over 500,000 followers. Guangdong Dongguan Dayi stood out with over 1.5 million followers, surpassing Xinjiang, the second-ranked team, with 540,000 followers. In this study, we believe that the total number of LCF reflects the active level of fan interaction to a certain extent, so the social media posts of the top five LCF teams were selected for analysis: Liaoning Bengang (49,016), Dongguan Dayi (47,547), Beijing Shougang (8,901), Shanghai Jushi (8,046), and Shanxi Fenjiu (7,928). Consequently, 245 posts from these five teams were selected for the subsequent phase of three-level coding, aiming to explore the significance and necessity of competitive balance for teams or leagues through competition-related content on social media platforms. See Appendix G for a table of data collection related to Weibo posts.

Three-level Coding Process

Open coding: initial concept refinement

Open coding mainly encodes meticulous examination of original materials, concepts are extracted and integrated based on similarity or relevance, leading to the formation of abstract categories. The process involves word-by-word encoding of the data and constant comparisons,

facilitating conceptualization and categorization (Gambetti, Graffigna, & Biraghi, 2012). 245 social media posts and 5 interviews was subjected to open coding, resulting in the extraction of 157 initial concepts and the establishment of 36 categories whose results are shown in Table 3. Due to the excessive number of concepts, the complete content of concepts is presented in Appendix H. The findings highlight the effectiveness of open coding in capturing meaningful insights from the data.

Table 3. Results of Open Coding

Category	Concept
Level of understanding of competitive balance	Basic understanding
	...
Definition of competitive balance	Relatively even distribution of strength
	...
Existence of competitive balance	Exist but vary in magnitude
	...
CBA's view on competitive balance	The league's organizers are continuously striving to promote it
	...
Reasons for the lack of competitive balance in the CBA	Players' influence or rights may be weaker in terms of competitive balance
	...
The impact of competitive balance on the CBA	It's a positive aspect of the league
	...
Relationship between competitive balance and uncertainty of outcome	A certain correlation between them on the surface
	…
Change of uncertainty of outcome	Stronger than in previous years
	...
Impact of increasing uncertainty of outcome	Make the CBA league more entertaining
	...
Examples of change of uncertainty of outcome	Score difference between teams in each quarter of the game
	...
Lack of competitive balance	Weak teams intentionally performing poorly
	...
Impact of competitive balance mechanism	Promote competitive balance
	...
Purpose of the CBA	Serving and developing talents for national

	team
	...
Knowledge of draft system	Its primary goal was to establish a pathway for college players to enter professional league
	...
Impact of draft system	Not necessarily to achieve competitive balance
	...
Impact of salary cap	Player salaries deviated from the actual value
	...
Knowledge of free agency	Introduced new contract system in 2019
	...
Impact of free agency	Improve competitive balance to some extent
	...
Reasons for low player mobility	It involves personal considerations and emotions
	...
Impact of low player mobility	Affect players' salary and even performance
	...
Knowledge of revenue sharing	Dividends
	...
Impact of revenue sharing	Promote overall competitive balance
	...
Knowledge of talent distribution	Hierarchical model
	Disparity in talent distribution is quite significant
Geographical impact on talent distribution	Northern regions relatively have more basketball talent because of factors such as physique and athleticism
	...
Impact of talent distribution	I don't think it's entirely balanced overall
	...
Economic disparities	Attractiveness of players
	...
Other factors impact competitive balance	Foreign player policy
	...
Future of CBA's competitive balance	Can't predict
	...
Suggestions for the CBA	Separation of management and operations
	...
Foreign player policy	Influenced the dynamics of the game and the overall structure of teams
	...
Promotion and relegation system	It would not only affect the level of

	competition but also have consequences for the participation of relegated clubs and their relationship with local sports authorities and basketball association
	...
Powerhouse team	There are always powerhouse teams in every league
	...
Attribute of the CBA	Semi-commercialized
	...
Uniqueness of organizational structure of the CBA	Natural advantage in recruiting talent
	...
Composition of teams in the CBA	Sports bureau
	...
Content related to competitive balance in social media	Description of victory
	...

Axial coding: determination of the main category

In axial coding phase, the primary objective is to examine the diverse connections among concepts and categories, identifying potential logical and hierarchical relationships among constructs (Ligita et al., 2019; Turner & Astin, 2021). Additionally, axial coding entails classifying and establishing paradigms such as causality, interaction, time sequence, among others. This paper analyzed the relationship among 36 categories obtain from open coding, and integrated them into 16 main categories, which are shown in Table 4. As mentioned before, considering the massive number of refine concepts of open coding, the complete contents of concepts will be shown in Appendix H.

Table 4. Results of Axial Coding

Main Category	Subcategory	Concept
Level of understanding of competitive balance	Level of understanding of competitive balance	Basic understanding
		...
		Relatively even distribution of strength

Definition of competitive balance	Definition of competitive balance	...
Existence of competitive balance	Existence of competitive balance	Exist but vary in magnitude
		...
Lack of competitive balance	Examples of lack of competitive balance	Weak teams intentionally performing poorly
		...
	Reasons for the lack of competitive balance in the CBA	Players' influence or rights may be weaker in terms of competitive balance
		...
Necessity of competitive balance	The impact of competitive balance on the CBA	It's a positive aspect of the league
		...
	CBA's view on competitive balance	The league's organizers are continuously striving to promote it
		...
Uncertainty of outcome	Change of uncertainty of outcome	Stronger than in previous years
		...
	Impact of increasing uncertainty of outcome	Make the CBA league more entertaining
		...
	Reflections of uncertainty of outcome	Score difference between teams in each quarter of the game
		...
Relationship between competitive balance and uncertainty of outcome	Relationship between competitive balance and uncertainty of outcome	A certain correlation between them on the surface
		...
Purpose of the CBA	Purpose of the CBA	Serving and developing talents for national team
		...
Impact of competitive balance mechanism	Impact of competitive balance mechanism	Promote competitive balance
		...

	Knowledge of draft system	Its primary goal was to establish a pathway for college players to enter professional league
		...
	Impact of draft system	Not necessarily to achieve competitive balance
		...
	Impact of salary cap	Player salaries deviated from the actual value
		...
	Knowledge of free agency	Introduced new contract system in 2019
		...
	Impact of free agency	Improve competitive balance to some extent
		...
	Knowledge of revenue sharing	Dividends
		...
	Impact of revenue sharing	Promote overall competitive balance
		...
Talent distribution	Knowledge of talent distribution	Hierarchical model
		...
	Geographical impact on talent distribution	Northern regions relatively have more basketball talent because of factors such as physique and athleticism
		...
	Impact of talent distribution	I don’t think it’s entirely balanced overall
		...
Economic disparities	Impact of economic disparities	Attractiveness of players
		...

Other factors impact competitive balance	Other factors impact competitive balance	Overall management of the CBA
		...
	Foreign player policy	Influenced the dynamics of the game and the overall structure of teams
		...
	Promotion and relegation system	It would not only affect the level of competition but also have consequences for the participation of relegated clubs and their relationship with local sports authorities and basketball association
		...
	Powerhouse team	There are always powerhouse teams in every league
		...
	Reasons for low player mobility	It involves personal considerations and emotions
		...
	Impact of low player mobility	Affect players' salary and even performance
		...
Future of CBA's competitive balance	Future of CBA's competitive balance	Can't predict
		...
Suggestions for the CBA	Suggestions for the CBA	Separation of management and operations
		...
Uniqueness of the CBA	Attribute of the CBA	Semi-commercialized
		...
	Uniqueness of organizational structure of the CBA	Natural advantage in recruiting talent
		...
	Composition of teams in the CBA	Sports bureau
		...

Content related to competitive balance in social media	Content related to competitive balance in social media	Description of victory
		...

Level of understanding of competitive balance refers to the participants' familiarity with and comprehension of the concept of competitive balance, without specific indicators or hierarchical divisions. The definition of competitive balance pertains to participants' perspectives and knowledge of the concept. The existence of competitive balance seeks to answer the question of whether competitive balance exists in the CBA league and which aspects reflect its presence. Simultaneously, the category of lack of competitive balance presents, to some extent, an opposing relationship to the previous main category, reflecting aspects in the CBA league where competitive balance is lacking. It comprises two subcategories: examples of lack of competitive balance and reasons for the lack of competitive balance in the CBA. The necessity of competitive balance in the CBA explores the significance of competitive balance for the CBA league, serving as a main category to address the research question. It includes two subcategories: the impact of competitive balance on the CBA and the CBA's perspective on competitive balance.

Uncertainty of outcome serves as another core concept in this study and is also used as a main category in axial coding. It comprises three subcategories: change of uncertainty of outcome, impact of increasing uncertainty of outcome, and reflections of uncertainty of outcome. The next category serves as both a main category and a subcategory, which is the relationship between competitive balance and uncertainty of outcome. It refers to the potential logical relationship between the concepts of competitive balance and uncertainty of outcome. The purpose of the CBA refers to the goals and objectives that guide the league's management and operations. The impact of the competitive balance mechanism refers to the effects of relevant policies or rules established to maintain competitive balance. This main category is derived from one of its subcategories. It

consists of eight subcategories: impact of the competitive balance mechanism, knowledge of the draft system, impact of the draft system, impact of the salary cap, knowledge of free agency, impact of free agency, and impact of revenue sharing.

Talent distribution in this study refers to the distribution of players among different teams in the league. It has two subcategories: geographical impact on talent distribution and impact of talent distribution. Economic disparities refer to the economic gaps between different teams or clubs, with its subcategory being the impact of economic disparities. Other factors impacting competitive balance refers to additional factors identified by participants that influence competitive balance in the CBA league. It consists of six subcategories: other factors impacting competitive balance, foreign player policy, promotion and relegation system, powerhouse team, reasons for low player mobility, and impact of low player mobility. The future of CBA's competitive balance explores participants' predictions or expectations regarding the development of competitive balance in the CBA league. Suggestions for the CBA focus on participants' recommendations for improving competitive balance in the league. The uniqueness of the CBA pertains to the distinctive attributes of the CBA league, including three subcategories: attribute of the CBA, uniqueness of the organizational structure of the CBA, and composition of teams in the CBA. Lastly, content related to competitive balance in social media serves as a main category that involves coding social media posts from Weibo to summarize the content related to competitive balance.

Selective coding: determination of core categories

The final stage of three-level coding is selective coding, which main purpose is to systematically refine the core category, analyze the relationship between main categories from axial coding, and find reasonable storyline to establish the connection among categories (Holt et

al., 2022). Compared to main or subcategories, the core category should possess a commanding essence and have the capacity to encompass a wide range of research findings. Through the in-depth analysis of the 16 main categories mentioned above and the comparison of the data, three core categories were identified, namely, core concept, internal influence, and external influence. The relationship between the different categories can be seen in Table 5.

Table 5. Results of Selective Coding

Core Category	Main Category	Subcategory
Core concept	Level of understanding of competitive balance	Level of understanding of competitive balance
	Definition of competitive balance	Definition of competitive balance
	Existence of competitive balance	Existence of competitive balance
	Lack of competitive balance	Examples of lack of competitive balance
		Reasons for the lack of competitive balance
	Necessity of competitive balance	The impact of competitive balance on the CBA
		CBA's view on competitive balance
	Relationship between competitive balance and uncertainty of outcome	Relationship between competitive balance and uncertainty of outcome
	Uncertainty of outcome	Change of uncertainty of outcome
		Impact of increasing uncertainty of outcome
		Examples of uncertainty of outcome
Internal influence	Impact of competitive balance mechanism	Impact of competitive balance mechanism
		Knowledge of draft system
		Impact of draft system
		Impact of salary cap
		Knowledge of free agency
		Impact of free agency
		Knowledge of revenue sharing
		Impact of revenue sharing
		Foreign player policy
	Talent distribution	Knowledge of talent distribution
		Geographical impact on talent

		distribution
		Impact of talent distribution
	Economic disparities	Impact of economic disparities
	Other factors	Promotion and relegation system
		Foreign pl
		Powerhouse team
		Reasons for low player mobility
		Impact of low player mobility
External influence	Purpose of the CBA	Purpose of the CBA
	Future of CBA's competitive balance	Future of the CBA's competitive balance
	Suggestions for the CBA	Suggestions for the CBA
	Uniqueness of the CBA	Attribute of the CBA
		Uniqueness of organizational structure of the CBA
		Composition of teams in the CBA
	Content related to competitive balance in social media	Content related to competitive balance in social media

The core concept contains two main dimensions, namely competitive balance and uncertainty of outcome. Competitive balance includes level of understanding of competitive balance, definition of competitive balance, existence of competitive balance, lack of competitive balance, necessity of competitive balance. Uncertainty of outcome includes relationship between competitive balance, change of uncertainty of outcome, impact of increasing uncertainty of outcome, and examples of uncertainty of outcome. The subsequent core category is "internal influence," which refers to the factors within the CBA league that impact competitive balance. It encompasses four dimensions: competitive balance mechanism, talent distribution, economic disparities, and other factors. The final core category is "external Influence," which refers to the factors that impact competitive balance in the CBA league when viewed as a whole, analyzed from an external perspective such as management or expert scholars. It includes purpose of the CBA, future of CBA's competitive balance, suggestions for the CBA, uniqueness of the CBA, content related to competitive balance in social media.

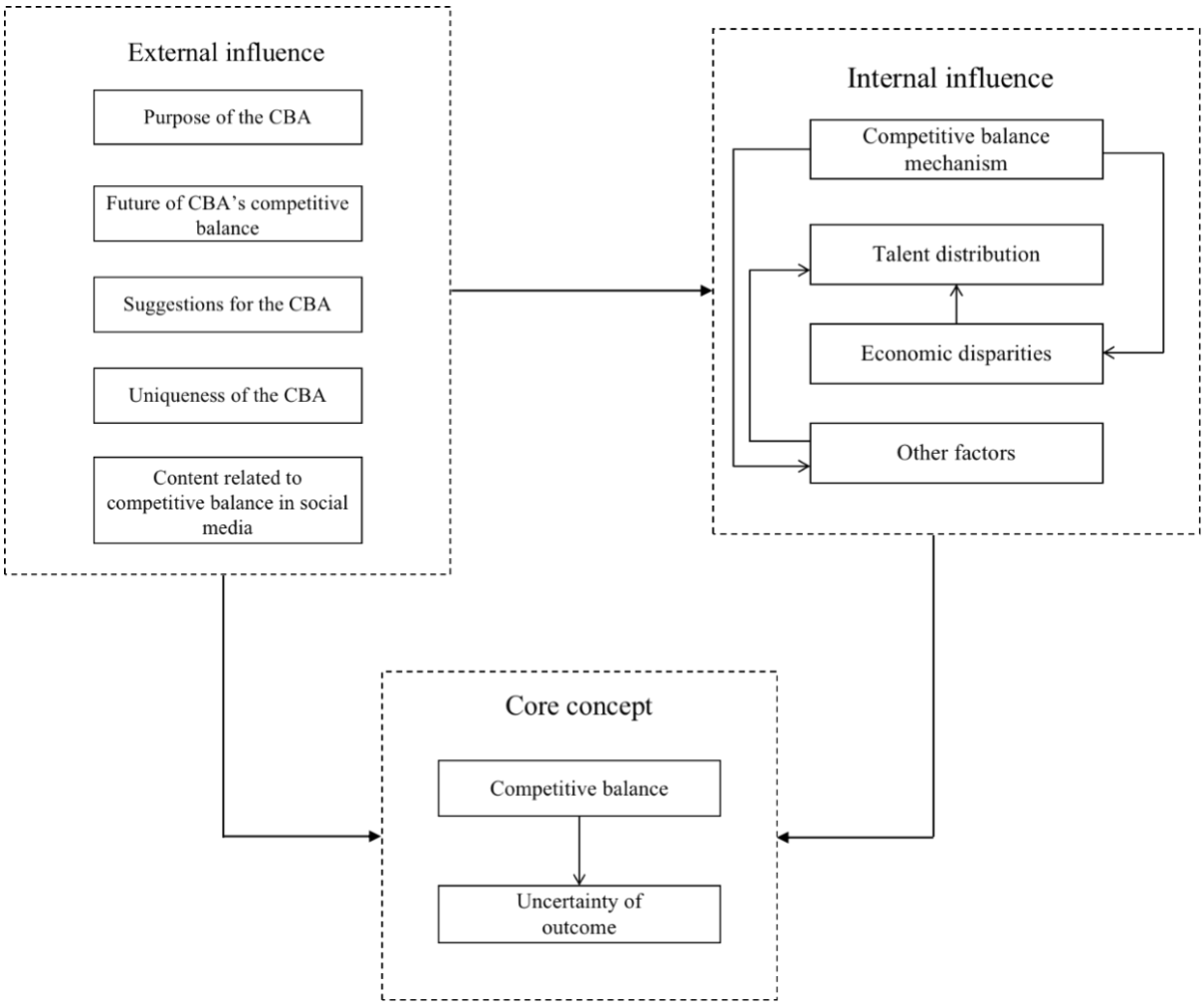
Theoretical Saturation Test

As mentioned before, to enhance the reliability and validity of the research, the analysis is halted when the case reaches theoretical saturation. Theoretical saturation occurs when the subsequent interview data fails to generate new concepts or yield new categories (Beck, 1993). In this paper, 4/5 of the total interview samples were randomly chosen for in-depth coding analysis and model construction, while the remaining 1/5 of the samples were dedicated to a theoretical saturation test. The findings of the study reveal that no additional concepts, categories, or relationships among categories emerged during the theoretical saturation test using the remaining 1/5 samples. Hence, it can be concluded that the theoretical framework of this paper has reached saturation.

The Findings Described in Three-level Coding

Based on the results of the three-level coding, this study compiled a "storyline" among the core categories and the main categories, which is presented in Figure 2. The purpose is to illustrate the relationship between the different categories and to correct the causality of critical variables contributing to competitive balance presented in Figure 1.

Figure 2. Revised Critical Variables Contributing to Competitive Balance



First of all, it should be noted that the establishment of a "storyline" between different categories is based on the constant comparison of different concepts during the three-level coding process. The "storyline" was established when the participants discussed the content of a category with reference to concepts belonging to other categories or explicitly pointed out the connections between different categories. At the same time, the researcher tried to ensure that the different relationships were established in a reasonable manner during the coding process.

External influence

From figure 2, it can be seen that there are no relationships among “external influence." The reason for this is that in the process of coding at three levels, especially through the analysis of the content between concepts, it was found that the participants did not mention the external factors. Although the five main categories were coded under the core category of “external influence," they seemed to be independent of each other. It is worth noting that the content of some concepts may be somewhat related between the different main categories, for example, when participants talked about the content belonging to the main category "purpose of the CBA"

> In the CBA, there were two seasons where games were played in empty arenas, eh, but the players had to continue competing while the audience was absent. Uh... From a commercial perspective, you make significant sacrifices. Therefore, I personally believe that the CBA is not solely driven by commercial or economic motives.

Although the concept of "not solely driven by commercial or economic motives" is related to "Semi-commercialized," it is clear from the context and background of the actual interviews that the participants were trying to explain the source of the CBA drivers rather than the attributes of the CBA. Such examples were frequent in the core category of "External influence", so we concluded that there was no significant logical or causal relationship between this main category.

Internal influence

On the other hand, Figure 2 highlights numerous interrelationships among the main categories within "internal Influence." This section aims to illustrate the construction of the storyline connecting these categories. To begin with, there is no obvious correlation exists between the competitive balance mechanism and talent distribution based on the interviews. As indicated in Table 5, the main category of competitive balance mechanism encompasses five dimensions: draft system, salary cap, free agency, foreign player policy, and revenue sharing. During the

analysis, none of the participants mentioned a link between the competitive balance mechanism and talent distribution, despite the draft system appearing to be closely associated with talent. For instance, one participant shed light on the underlying objective of implementing the draft system in the CBA league:

> Regarding the draft, uh... its main purpose was not necessarily to achieve competitive balance. Its primary goal was to establish a pathway for college players to enter the professional league. By opening this door, it would allow more college players to enter the CBA and have the opportunity to participate in the league. Eh... Before the draft, college players had limited channels to enter the CBA.

Although no direct impact of the competitive balance mechanism on talent distribution in the CBA league was identified, an alternate connection between the two can be established through the "bridge" of economic disparities. As one participant expressed, "In terms of competitive balance, the salary cap, as I mentioned previously, imposes restrictions on teams with significant financial resources. Consequently, one objective of the salary cap is to mitigate unfair competition resulting from economic disparities, particularly within the player market." Additionally, the aforementioned interviewer made a relevant remark:

> It (salary cap) also limits the length of player contracts overall because as players' individual value increases, uh, they may demand higher salaries. Similarly, teams that nurture excellent players from rookies will face challenges. Once these players become stars, like the Zhejiang team, uh, for example, they all started as rookies with lower salaries, but after several seasons, their salaries are bound to increase. So, teams face a choice: either find a way to keep player salaries within the salary cap or potentially face

> the phenomenon of free agents transferring. This is a positive aspect that contributes to competitive balance.

The relationship between economic disparities and talent distribution primarily manifests in the ability of teams with stronger economic resources to attract better players. However, unlike the NBA, where teams in more developed cities tend to attract more talented players due to higher contract offers and willingness to bear luxury taxes, the CBA operates differently. In the CBA, economic advantages mainly stem from the youth basketball players within the Chinese basketball youth training system, which significantly influences the talent pool and ultimately impacts the competitive strength of teams.

The youth training system in the CBA functions similarly to European basketball clubs, where each CBA club has its own player development system. In terms of economic disparities, the most apparent impact is the investment made by clubs in the development of youth players, encompassing aspects such as infrastructure, nutrition, and education. Since youth players within the youth system spend a substantial amount of time training and even living with the club, parents seek teams that can ensure the optimal development of their children. Consequently, economically more developed cities attract a larger number of talented youth players. In this context, the influence of economic differences on talent distribution becomes an inevitable factor. Participants in the study also mentioned the following observations:

> Along with the reforms and, eh, opening-up, Guangdong has attracted a large number of talented individuals due to its strong (economic) development. This has helped raise the level of talent in Guangdong. Uh... Generally speaking, from a historical and economic perspective, there are prominent disparities in talent distribution that have already formed

> a certain pattern. It would be difficult to change this pattern within a short period of two to three years.

Other factors, as one of the main categories of "internal influences", have four aspects: promotion and relegation systems, strong teams, player mobility, and some difficult to classify concepts are uniformly grouped into the subcategory of additional factors. The link between the competitive balance mechanism and other factors is mainly reflected in the influence of free agency on player mobility. One of the interviewees noted that free agency facilitates player mobility:

> After the introduction of this system (free agency) there is an important point. Now, players can earn a maximum of 6 million yuan per year. If they want to earn more, they might have to go abroad or find other means. I believe this can enhance player mobility between different teams. If a team has more money, players can choose to join them. This aspect can promote competitive balance within the entire league.

Based on the interviews conducted, it was revealed that low player mobility is closely intertwined with talent distribution in the CBA league. One significant factor contributing to this phenomenon is the imposition of excessive restrictions on players by local governments or sports bureaus. These restrictions can take various forms, including offering invisible welfare benefits to entice players to stay, such as securing guaranteed job positions for players' families. When players are limited in their freedom to explore the market and seek opportunities that maximize their value, it inevitably results in the accumulation of talent within their ranks. This accumulation, however, does not foster a conducive environment for competitive balance. A participant also emphasized the intricate nature of player mobility within the CBA league, underscoring the multi-faceted factors involved in the process:

Additionally, within the clubs, besides regular salaries, there may be other benefits or considerations, which exist in China but not necessarily in the NBA. These factors can also influence a player's decision and are a form of mutual understanding, considering their future retirement or career prospects. Therefore, when it comes to player movement in CBA, it's not just about sports or competition. It may even be influenced by national factors and a complex historical background. It cannot be simply measured from the perspective of competitive balance, talent mobility restrictions, or impediments.

Core concept

Drawing from the original theoretical framework of this study, it is evident that competitive balance and uncertainty of outcome emerge as pivotal concepts throughout the interviews. Prior to addressing the research inquiries concerning the significance of competitive balance in the CBA, it becomes imperative to elucidate the interrelationship between competitive balance and uncertainty of outcome. As depicted in Figure 2, competitive balance exerts influence on the level of uncertainty of outcome. Interview data substantiate that this relationship can be perceived as a mean to a purpose.

To maintain competitive balance, sports leagues establish regulatory bodies and implement suitable policies, aiming to ensure that the level of uncertainty of outcome captivates fans, which serves as one of the bedrock of all sports leagues. This holds particular relevance for the CBA league, given its ongoing transition toward commercialization. It is only by consistently attracting fans that the league can expand its market reach and attain the crucial objectives of augmenting revenue and enhancing the league's commercial value. A participant further expounded on this notion, shedding light on the significance of this perspective:

> The two (uncertainty of outcome and competitive balance) can be seen as the relationship between purpose and means. Uh... Personally, I believe that achieving competitive balance or maintaining it through various means ultimately aims to ensure the uncertainty of game results. If the expected win probability between the two sides in a match is, eh, already significantly disparate before the game starts, the attractiveness of that game decreases significantly, right? This can lead not only to a decrease in attention from fans of weaker teams but also potentially a decrease in attention from fans of stronger teams. However, as we all know, if you want to have a commercialized game, fan engagement is crucial, right?

In addition to the interconnections among the main categories within each core category, there are also associations between the three core categories. Firstly, within the "external influence" core category, one of the main categories highlights that one of the characteristics of the CBA league is its semi-commercialized nature. Although it has not yet achieved full commercialization, based on interview data such as "Yao Ming wants the CBA to become a truly standardized and market-oriented professional league," it can be inferred that the CBA league is undergoing a crucial phase of marketization and commercialization. When solid fan base and expanding the market are set as development goals for the league, the necessity of maintaining or improving competitive balance cannot be overlooked. This is because there is a certain association between competitive balance and uncertainty of outcome, and uncertainty of outcome, as one of the necessary conditions for attracting fans, indirectly indicates the interplay between competitive balance, fans, and marketization. Therefore, competitive balance is of paramount importance for the current development goals of the CBA league. This also explains why there is a relationship between "external influence" and "core concept."

The impact of "external influence" on "internal influence" mainly stems from the "uniqueness of the CBA." For instance, in the composition of different clubs within the CBA league, interview data reveals three types: those closely connected to sports bureaus, those closely connected to private enterprises, and those with connections to both. Clubs that have close ties with government agencies often impose stronger restrictions on players and can to some extent accumulate unfair advantages in talent, thereby affecting "talent distribution" within "internal influence." One participant cited the example of a team, Bayi, which has since disbanded. This team had a military background, and all players were selected from the Chinese military. In this case, the talent pool possessed by Bayi in terms of quality and quantity far exceeded that of other clubs, which contributed to Bayi's former dynasty of six consecutive championships. As for player mobility restrictions, clubs closely associated with local sports bureaus employ unconventional means to achieve their goals, such as offering long-term job positions to ensure players' post-retirement livelihoods. These factors are detrimental to the full marketization and commercialization of the CBA league, as expressed by the participants:

> In the past, Bayi enjoyed a natural advantage in recruiting talent because they could directly select players from different military teams and bring them into their own team. For example, if there was a talented player in the Shenyang military team, they could be directly transferred to Bayi. This significantly affected competitive balance, especially considering that teams like Bayi, Qianwei, and the Southern Air Force were all part of the same league. So, they could easily recruit players from other teams without any cost during the league season, which was an important factor. Even now, although the situation is not as severe as before, such cases still exist. For instance, in a team like Liaoning that is directly affiliated with a sports bureau, they can limit the movement of

players. If, for example, another team offers a top salary to Guo Ailun, but the sports bureau cannot match it, they may use alternative means to retain him. They might offer a permanent position or provide job security for his family, along with additional welfare benefits, to indirectly increase his income.

The relationship between “internal influence" and “core concept" is inseparable and relatively significant, because "internal influence", "talent distribution", and economic disparities" in the "internal influence" is a part of the competitive balance theory that has been widely focused on. On the one hand, this relationship is already known from the original theoretical framework, and on the other hand, according to the interviews, the participants frequently mentioned the influence of the main categories of "internal influence" on competitive balance, such as economic disparities:

> When it comes to economic disparities, I believe they have a significant impact (on competitive balance). Uh... As I mentioned earlier, the economic perspective is closely related to the attractiveness of players, right? Moreover, on a deeper level, the economic foundation influences the overall development of a team.

Summary

This chapter employed three-level coding to analyze the content of semi-structured interviews and examine social media content through document examination, aiming to establish a framework for the relationships between different categories. The analysis results revealed that participants generally recognized the necessity of competitive balance in the CBA league, albeit not as an absolute requirement. The main reason is that, given the current semi-commercialized nature of the CBA league with the goal of transitioning to full commercialization, maintaining or improving competitive balance would contribute to ensuring the unpredictability of matches and thereby

attracting fans. This is seen as one of the key pathways to achieving commercial success. However, considering the historical factors of the league and the complexity of club compositions, overly idealizing competitive balance is unrealistic. Additionally, the interrelationships among the core categories identified through three-level coding - core concept, internal influence, and external influence - elucidate how these elements mutually impact each other, thus identifying the crucial factors that truly influence competitive balance.

CHAPTER 5

DISSCUSSIONS, IMPLICATIONS, AND CONCLUSIONS

This chapter will discuss the findings and implications of the research. The focus of the discussion will be to address the research questions, explore the practical implications for sports managers, examine the theoretical contributions of this research, and future research directions. It is important to note that before delving into a comprehensive discussion, the cultural specificity of these findings must be acknowledged. While incorporating existing theoretical frameworks from previous studies, it should be recognized that the subject of investigation is unique and may not be directly applicable to other countries' sports or sports leagues.

The Results for the Research Questions

Necessity of Competitive Balance in the CBA

The first research question addressed in this study is whether the CBA has competitive balance or not. The fundamental purpose of this question is to explore the significance or necessity of competitive balance in the CBA. Based on the interview data, all participants provided affirmative answers regarding the presence of competitive balance in the CBA. Moreover, most participants also emphasized that the competitive balance in the CBA may differ from other leagues. During the interviews, we attempted to extract a definition of competitive balance that aligns with the practical context of the CBA, considering participants' knowledge and professional backgrounds. One participant expressed inability to provide a definition, while another used the somewhat ambiguous term "sense of balance," which we did not consider as a reference. The remaining participants expressed similar ideas, highlighting keywords such as "relatively even

distribution of strength among teams" and "similar level of competitive ability." These findings align to some extent with the definitions of competitive balance presented by scholars such as Rottenberg (1956) and Forrest (2002) in our literature review. Consequently, our analysis led us to recognize the idealization of redefining competitive balance solely based on the context of the CBA. Therefore, we will adopt the widely used expression "relatively even distribution of strength among teams" to understand competitive balance in the context of the CBA.

To answer the necessity of competitive balance in the CBA, we must first understand the goals of the league. Based on the interviews, it is evident that the CBA, currently positioned as a semi-commercialized sports league, has embarked on a reform path towards full commercialization since Yao Ming was elected as the chairman of the Chinese Basketball Association. Within this context, expanding the market and fan base are crucial objectives for the commercial transformation of the CBA. As a commercially-oriented league, the "competition" is the primary product they sell. Fans purchase tickets to attend games, rating on television attracts more investments, and consumers buy team merchandise. The revenue generated from these activities is derived from the "competition" itself. Exciting and intense games have positive impacts on attracting fans, increasing viewership, and even expanding the league's visibility. The uncertainty of outcomes is considered an important factor of the excitement level in games, as emphasized in the uncertainty of outcome theory.

Based on the three-level coding and Figure 2's "core concept," we can observe the correlation between competitive balance and outcome uncertainty. Participants referred to this relationship as a "purpose and means." In sports leagues, maintaining competitive balance serves the purpose of ensuring outcome uncertainty, thereby guaranteeing the excitement of the games.

Therefore, maintaining competitive balance will be a necessary condition for the CBA to achieve its goal of full commercialization.

Areas and Cause of Imbalance in the CBA

After clarifying the necessity of competitive balance for the CBA league, the next research question that needs to be answered is which areas lack competitive balance and the causes of these lack. Combining the three-level coding and grounded theory, we can see that the lack is mainly reflected in the following three areas: a) uneven distribution of resources; b) mechanisms did not meet expectations; c) negative competition.

First and foremost, the uneven distribution of resources can be classified into two main aspects: talent resources and economic resources. The unequal distribution of talent resources is primarily because of the overall trend of young basketball talents migrating to the southeastern coastal cities, as well as the restricted mobility of players among different clubs in the player market. The phenomenon of talent migration is closely linked to the urban development planning in China. Due to political factors such as the reform and opening-up policies, the southeastern coastal cities have generally experienced more favorable development compared to inland cities. Simultaneously, when considering China's basketball youth training system, it becomes evident that the key entities influencing the talent accumulation of clubs are the young basketball players. Against the background of urban development, clubs situated in economically thriving cities tend to possess more abundant resources for player cultivation, such as well-equipped facilities and access to excellent educational institutions. Therefore, parents of young players are more inclined to send their children to places that can better facilitate their future development. In this scenario, the geographical and political factors contributing to the imbalance in economic resources to some extent determine the uneven distribution of talent resources.

Another situation is that when players enter the CBA league, even introduced the contract system like free agency, there are still few players who can really seek to maximize their value as free agents. This is because many clubs in the CBA league have close ties with local government agencies, for example, the personnel rights of players in Liaoning clubs belong to the Liaoning Sports Bureau. Through interviews, we learned that some clubs even provide players with off-court benefits to attract them to stay with the team, such as secure jobs for their families. These unfair competitions only further restrict player mobility, which leads to an uneven distribution of talent resources and ultimately reflects in competitive imbalance.

While the CBA league has many mechanisms in place to maintain competitive balance, according to interviewees, some of these mechanisms do not appear to be effective or have little effect. Draft system is widely considered to be an important mechanism for competitive balance in North America. However, the main purpose of this mechanism in the CBA league seems to be to open up channels for college players and NBL players to enter the CBA. Prior to this, clubs in the CBA relied heavily on their own youth training system, partly because the overall level of college players was far from what professional clubs wanted, and partly because clubs lacked the appropriate channels to select players. According to the interviews, more and more clubs are beginning to focus on acquiring talent through the draft. Although the free agency system mentioned above was introduced to CBA in 2019, the experts or management interviewed believe that free agency does not have a significant impact on the competitive balance as it is limited by clubs or sports bureaus. Meanwhile, revenue sharing seems to face the same situation, with some interviewees believing that this mechanism has not contributed to the competitive balance of the CBA league. Although clubs currently receive a certain number of dividends, the revenue

generated by revenue sharing still seems to be difficult to fill the economic disparity between clubs, considering that most teams have their own additional funding sources.

Lastly, an aspect of competitive imbalance in the CBA league is the occurrence of negative competition among certain clubs. There are teams that consistently rank at the bottom of the league, seemingly lacking ambition in terms of competitiveness due to financial or club management issues. For instance, Jilin, facing financial problems, experienced the loss of their most valuable foreign player after this season, further weakening their competitive level. Simultaneously, even highly competitive clubs are not exempt from engaging in negative competition. Although rare, in the 2022-23 playoffs, both Shanghai and Jiangsu had their qualification revoked by the Chinese Basketball Association due to engaging in negative competition. The specific reasons behind these instances of negative competition are not the focus of this study. Nevertheless, such occurrences have had a severe negative impact on the CBA league, leading to strong dissatisfaction expressed by many fans and media. The league management even took disciplinary actions, including suspending the team general manager and imposing a ban on coaches from coaching for a minimum of three years. Negative competition is undesirable in any sports league as it significantly undermines the competitive balance, leads to fan attrition, and damages the league's image.

Next, we will combine the theoretical foundation of this study, the constraint theory, to further explore the limitations that hinder the achievement of competitive balance in the CBA. Based on the aforementioned content, we can identify geographical and political factors as the core reasons for the uneven distribution of talent and economic resources. The geographical conditions in China determine that coastal cities in the southeast are favored, as they benefit the most from the reform policies related to import and export, owing to their access to ports and marine resources compared to inland cities. Consequently, the economic development in southeastern coastal cities

is generally more advanced, leading to the concentration of economic resources in these areas, which affects the distribution of economic resources among clubs in the CBA. Clubs located in the southeastern coastal cities tend to have greater economic advantages in the player market. Simultaneously, the uneven distribution of club economic resources also impacts the talent pool of young basketball players, resulting in a concentration of talent in certain clubs, leading to significant disparities in talent among clubs. According to the influencing factors model summarized by three-level coding, talent distribution and economic disparities are the main factors influencing competitive balance. Therefore, we consider geographical and political factors as a constraint in the CBA.

Two additional aspects that reflect the lack of competitive balance in the CBA are: mechanisms did not meet expectations and negative competition. Based on the analysis above, excessive intervention by government institutions is identified as a core reason. Firstly, many competitive balance mechanisms in the league fail because some clubs rely on their local government's power to disregard rules or exploit loopholes. For instance, although there is a free agency system, only a few players can truly become free agents and maximize their market value. This is often influenced by restrictions imposed or benefits provided by local governments, which are capabilities that clubs themselves do not possess. When certain clubs establish close connections with local government institutions, it further suppresses those clubs without sufficient support, weakening their competitiveness on court or off court. This explains why some clubs in the CBA engage in negative competition. Therefore, this study considers excessive intervention by government institutions as another constraint that hinders the achievement of competitive balance in the CBA.

Practical Implications

For league management, this study offers several suggestions to better maintain competitive balance, enhance outcome uncertainty, expand fan base, and accelerate the commercialization transformation of the league. Drawing upon interviews and the model presented in Figure 2, this study will propose entry points and strategies.

First, one aspect that was mentioned by multiple participants is the draft system. They believe that the draft system needs more attention, such as expanding recruitment channels for player selection and exploring the possibility of integration of youth training systems with the draft. With the overall improvement in the level of college players and the National Basketball League (NBL), there will be more talented players emerging in the future, which can help the CBA league expand its pool of talented reserves. One of the interviewees spoke from the perspective of coach:

> At this stage, I think the draft system deserves particular attention. Maintaining a strong draft system is beneficial for overall competitive balance. With the increasing strength of college basketball players, there will be more talented college players entering the CBA. They can become core players or players worth developing for CBA teams.

Another suggestion is that the league should focus more on accelerating its commercialization efforts and expanding its fan base. For example, after the reintroduction of home and away games, each team should leverage the surging enthusiasm of fans to create a better game experience, thereby expanding the market. However, due to the close connection between the CBA league and the government, there will certainly be obstacles on the path to commercialization. Conflicts may arise, such as recruitment of foreign players and increasing their playing time, which may conflict with the goal of nurturing local basketball talents for the national team. Finding a balance between government demands and commercialization goals will be a crucial aspect that the league management needs to address. One scholar noted that:

> From a market perspective, when there were two or three foreign players who didn't have much playing time, it wasn't necessarily a bad thing for the market. So, how league managers balance the national team and league development is something they have always considered. From a market perspective, I believe having more foreign players and increased playing time could be a good thing. However, it may contradict the goal of developing domestic talent for the national team.

In addition, the CBA should strengthen its governance in non-competitive aspects, particularly in managing the league environment. For example, efforts should be made to combat negative competition behaviors and enhance the level of referee officiating. When a league fails to create a positive image and a favorable game environment, it can severely hinder its development and even result in the loss of fans. At the same time, players should consider establishing a players' association. As mentioned earlier, players have a relatively low status in the CBA league and clubs, so a players' association would better protect their rights. This would increase players' influence and potentially reshape the power structure of the CBA, including future competitive balance. One participant elaborated:

> I believe the most important factor is to govern the non-game aspects of the league, specifically the management of the league environment…Negative play has always been a concern, so it is crucial to crack down on such behavior and strengthen the management of players, coaches, and referees. These aspects should be the focus of league governance.

Last but not least, attempting to unify the goals of clubs would be an important means to influence competitive balance in the league. However, objectively speaking, this suggestion also poses significant challenges. In the CBA, clubs have diverse backgrounds, and different clubs may

have different goals, such as promoting their enterprises, competing for championships, or pursuing other objectives. In such a context, reintroducing a promotion and relegation system may be a worthwhile consideration. While this could potentially affect the relationship between local governments and the basketball association, if the goal is to better maintain competitive balance and achieve a true transformation towards commercialization, it is necessary to strive changing the connection between the CBA league and government institutions.

Theoretical Contributions

Many scholars initially focus on how to better measure the competitive balance in China's professional sports leagues, but they lack a clear explanation of whether competitive balance is suitable for the local environment. Yan (2016) points out the need for further theoretical exploration by scholars: whether professional sports leagues are suitable for balanced development on the path of Chinese socialist development. This study establishes the necessity of competitive balance for the development of the CBA league through qualitative research, further confirming that competitive balance is a key factor underpinning the current development goals of the CBA. It provides practical guidance for theoretical research on competitive balance in China's professional sports.

While the definition of competitive balance in this study aligns with previous research (Forrest & Simmons, 2002; Rottenberg, 1956), it makes a unique theoretical contribution. In the literature on competitive balance, scholars have identified numerous factors that can influence competitive balance, but there is a lack of exploration regarding how these factors interact with competitive balance. Through grounded theory, this study develops a key factor model of competitive balance that is tailored to the CBA league. This model can be applicable to other

Chinese professional sports leagues that seek to maintain or enhance competitive balance, not just limited to the CBA.

The model, by incorporating the ideas of constraint theory, offers a fresh perspective to understand the factors that constrain the achievement of competitive balance in the CBA league and how they interact with each other. Additionally, through discussions with experts and scholars about the relationship between competitive balance and uncertainty of outcomes in the CBA league, this study finds a widespread agreement among participants that uncertainty of outcomes serves as a logical outcome of competitive balance. This provides a new empirical case for the branch of uncertainty of outcome hypothesis (UOH) in competitive balance research, further highlighting the close connection between these two theories.

Conclusions

The results of this study indicate that competitive balance in the CBA league is influenced by two aspects: internal and external influences. Firstly, external influences encompass the purpose of the CBA, the future of competitive balance in the CBA, suggestions for the CBA, the uniqueness of the CBA, and content related to competitive balance in social media. These factors are analyzed from an external perspective, viewing the CBA as a whole. For example, the operational purpose of the CBA league transitioning from semi-commercialization to full commercialization would drive the league management to pay more attention to competitive balance. This is because uncertainty of outcomes, as a key factor influencing the value of leagues, is an expression of competitive balance.

On the other hand, internal influences include the competitive balance mechanism, talent distribution, economic disparities, and other factors. This involves a deeper analysis of various aspects within the league. For instance, the competitive balance mechanism encompasses multiple

policies designated by the management, which influence competitive balance by affecting economic disparities between clubs or talent distribution within the league. The study also found that external influences can impact internal influences. The aforementioned purpose of the CBA has impact on the competitive balance mechanism. For example, the introduction of the draft system aims to break down the barriers in player recruitment and improve the dominance of a few teams, thus enhancing the intensity of matches and attracting fans. Ultimately, by integrating the models derived from grounded theory and the constraint theory, it can be concluded that geographic and political factors, as well as excessive intervention by government institutions, are identified as constraints that limit the achievement of competitive balance in the CBA.

For the CBA league, the challenge lies in striking a balance between commercialization and government demands. Although the model developed in this study can help the league identify entry points for maintaining and improving competitive balance, it is still necessary to consider the needs of national and local governments when formulating rules. For instance, if the focus is solely on improving the excitement of the games to increase commercial value, the CBA may continually encourage clubs to recruit higher-level foreign players. This could pose challenges to the survival and development of local players and even lead to talent drain, which is certainly not a situation desired by the sports authorities. It is important to acknowledge that the current development of the CBA league cannot completely detach itself from the government. Therefore, finding the right balance between commercialization goals and government demands is crucial. The league management needs to carefully consider the long-term development of local basketball talents while also meeting the expectations of the commercialization. Collaboration and communication between the CBA league, government authorities, and other stakeholders are essential in navigating this complex relationship.

Future Research

This study has cultural specificity and may not be directly applicable to professional sports leagues outside of China. Therefore, further research on this topic could be considered. It is worth considering conducting comparative analyses to validate the differences between the development of professional sports leagues in other countries and China. Such analyses would contribute to exploring more suitable solutions to address the competitive balance issue faced by the CBA.

As this study falls under qualitative research, introducing quantitative analysis could be beneficial to further validate the logical relationships presented in the research findings. Firstly, quantitative research can be conducted to validate the identified themes or models from this study. For example, validation factor analysis can be employed to establish a theoretically meaningful factor structure. Similarly, based on the influencing factors identified in grounded theory, efforts can be made to develop a measurement scale for assessing competitive balance in Chinese professional sports leagues. This would address the existing gap in research regarding the lack of measurement models tailored to the specificities of the Chinese sports context.

Moreover, in regard to this study, it would be beneficial to broaden the range of interview subjects in the semi-structured interviews, such as including fans from different teams or individuals who are not avid sports enthusiasts, to understand how they perceive the significance of competitive balance in professional sports. In this study, the effectiveness of various competitive balance mechanisms was assessed based on the interview content provided by the participants. However, it is inevitable that these interview responses may have subjectivity, and participants may provide ambiguous expressions due to the sensitivity of certain topics. In the future, adopting alternative perspectives may allow for a more comprehensive and in-depth evaluation and optimization of relevant policies in professional sports leagues. For example, alternative indices

in causal inference or machine learning methods based on policy learning and a fair policy perspective could be explored.

Furthermore, it would be valuable to study the significance of competitive balance and its influencing factors in other sports leagues in China. The Chinese sports market is vast, with various types of sports leagues emerging, such as football, volleyball, table tennis, and baseball, among others. Sports like volleyball, table tennis, and badminton have achieved excellent results on the international stage through China's elite sports development system, producing a large number of outstanding athletes. In this context, it becomes important to explore how to establish mature professional sports leagues to fill the gaps in these sports events in the market. This aligns with the Chinese government's call for a transition from elite sports to mass sports.

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Appendix A - INFORMATION LETTER TO RECRUIT SPORT MANAGER AND COACH PARTICIPANTS

Dear :

My name is Weizhe Li and I'm a graduate student in the department of Kinesiology at The University of Georgia conducting a study about competitive balance in the Chinese Basketball Association (CBA). The purpose of this study is to find out how the CBA understands and applies competitive balance, delve into the issues caused by competitive balance and explore the solutions of competitive imbalance to help Chinese professional sports organizations better improve the quality of their game products and services. I really think you'd be a good fit as a participant in my study and hope you can participate. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

You are invited to participate in a research study, which examines the competitive balance issues in the CBA. We are specifically looking for participants who are sport managers and coaches involved in the Beijing Duck, Beikong Royal Fighter, Fujian Sturgeons, Guangdong Tigers, Guangxia Lions, Guangzhou Loong Lions, Jiangsu Dragons, Jilin Northeastern Tigers, Liaoning Flying Leopards, Qingdao Eagles, Shandong Heros, Shanghai Sharks, Shanxi Loongs, Shenzhen Aviators, Sichuan Whales, Tianjin Pioneers, Tongxi Monkey Kings, Xinjiang Flying Tiger, Zhejiang Golden Bulls. You were selected as a possible subject because you are involved with one of those teams.

The interview will be conducted through a combination of means including e-mail, telephone, and online video conversation (e.g., WeChat, Zoom), and should only take about 30-60 minutes. You will be asked for your name and which team you work with. If requested, your real name can be changed, and a pseudonym can be used. Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law.

Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the study investigator and his/her research associates, the University of Georgia Institutional Review Board or its designees, and (as allowed by law) state or federal agencies, specifically the Office for Human Research Protections (OHRP) who may need to access your research records. You will not receive payment for taking part in this study.

For questions about the study, contact the researcher Weizhe Li at wl74386@uga.edu or 706-248-4274. For questions about your rights as a research participant or to discuss problems, complaints or concerns about a research study, or to obtain information, or offer input, contact the UGA Human Subjects Office at 706-542-3199 or visit research.uga.edu/has

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. Leaving the study will not result in any penalty or loss of benefits to which you are entitled. Your decision whether or not to participate in this study will not affect your current or future relations with the University of Georgia.

Thank you for your consideration!

Sincerely,
Weizhe Li

Appendix B - INFORMATION LETTER TO RECRUIT LEGAL EXPERT AND SCHOLAR PARTICIPANTS

Dear :

My name is Weizhe Li and I'm a graduate student in the department of Kinesiology at The University of Georgia conducting a study about competitive balance in the Chinese Basketball Association (CBA). The purpose of this study is to find out how the CBA understands and applies competitive balance, delve into the issues caused by competitive balance and explore the solutions of competitive imbalance to help Chinese professional sports organizations better improve the quality of their game products and services. I really think you'd be a good fit as a participant in my study and hope you can participate. I ask that you read this form and ask any questions you may have before agreeing to be in the study.

You are invited to participate in a research study, which examines the competitive balance issues in the CBA. We are specifically looking for participants who are legal experts or scholars who are not affiliated with the league but have rich understanding of CBA.

The interview will be conducted through a combination of means including e-mail, telephone, and online video conversation (e.g., WeChat, Zoom), and should only take about 30-60 minutes. You will be asked for your name and what organization you work with. If requested, your real name can be changed, and a pseudonym can be used. Efforts will be made to keep your personal information confidential. We cannot guarantee absolute confidentiality. Your personal information may be disclosed if required by law.

Organizations that may inspect and/or copy your research records for quality assurance and data analysis include groups such as the study investigator and his/her research associates, the University of Georgia Institutional Review Board or its designees, and (as allowed by law) state or federal agencies, specifically the Office for Human Research Protections (OHRP) who may need to access your research records.

You will not receive payment for taking part in this study.

For questions about the study, contact the researcher Weizhe Li at wl74386@uga.edu or 706-248-4274. For questions about your rights as a research participant or to discuss problems, complaints or concerns about a research study, or to obtain information, or offer input, contact the UGA Human Subjects Office at 706-542-3199 or visit research.uga.edu/hs

Taking part in this study is voluntary. You may choose not to take part or may leave the study at any time. Leaving the study will not result in any penalty or loss of benefits to which you are entitled. Your decision whether or not to participate in this study will not affect your current or future relations with the University of Georgia.

Thank you for your consideration!

Sincerely,
Weizhe Li

Appendix C – RESEARCH PARTICIPANT CONSENT FORM FOR MANAGER AND COACH PARTICIPANTS

UNIVERSITY OF GEORGIA
CONSENT FORM
Having Competitive Balance or Not: A Critical Issue for Chinese Basketball Association

You are being asked to take part in a research study. The information in this form will help you decide if you want to be in the study. Please ask the researcher(s) below if there is anything that is not clear or if you need more information.

Principal Investigator: James J. Zhang, Kinesiology, (352)-262-8999
Co-Investigator: Weizhe Li, Kinesiology, (706)-248-4274

I am a graduate student under the direction of Dr. James Zhang in the Department of Kinesiology at the University of Georgia. I invite you to participate in a research study entitled Having Competitive Balance or Not. The purpose of this study is to find out whether CBA has competitive balance or not? If they do, what are the competitive balance problems? What are the causes of these problems? If they don't, why is there no competitive balance? This study is looking to interview 3 – 6 individuals who currently are or previously were employed in a management or coach role with a CBA team. Your participation will involve answering questions and participating in a conversation with the researcher and should only take about 30 minutes – 1 hour. General demographic such as age, ethnicity, gender, education level, country, state, city of origin, job level/title, years working in sports, years working at the CBA level, and other positions held will be asked, as well as questions regarding the marketing of CBA. Some sample questions include:

- What do you think is competitive balance?

- Do you think the CBA is competitively balanced or competitively unbalanced?

- What do you think is the general philosophy of the organization when setting rules and regulations?

- How do you think the competitive balance of the CBA will affect your organization in the future?

You will be asked for your name and which team you work with. If requested, your real name can be changed, and a pseudonym can be used in the published study. As well, if requested, the team you work for can be generalized to "a team in the region" so as not to make your participation identified. The results of the research study may be published, but your name or any identifying information will not be used. The study may be published in an academic journal or presented at academic conferences. The interview will be recorded via an audio recording device

for the purposes of analyzing the data once all interviews are complete, but the researcher is the only individual who will have access to the audio file, and it will not be released with the study. It will be deleted once the research project is complete.

There are no direct benefits to participating in this research. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. Your participation in this research will not affect your employment status. There are no known risks or discomforts associated with this research.

(If you have any questions about this research project, please feel free to call me at (706) -248-4274 or send an email to wl74386@uga.edu. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, at telephone (706) 542-3199; email address IRB@uga.edu.

If you agree to participate in this research study, please sign below:

_____	_____	_____
Name of Researcher	Signature	Date
_____	_____	_____
Name of Participant	Signature	Date

Please keep one copy and return the signed copy to the researcher.

Appendix D– RESEARCH PARTICIPANT CONSENT FORM FOR LEGAL EXPERT AND SCHOLAR PARTICIPANTS

UNIVERSITY OF GEORGIA
CONSENT FORM
Having Competitive Balance or Not: A Critical Issue for Chinese Basketball Association

You are being asked to take part in a research study. The information in this form will help you decide if you want to be in the study. Please ask the researcher(s) below if there is anything that is not clear or if you need more information.

Principal Investigator:	James J. Zhang Kinesiology (352)-262-8999	**Co-Investigator**:	Weizhe Li Kinesiology (706)-248-4274

I am a graduate student under the direction of Dr. James Zhang in the Department of Kinesiology at the University of Georgia. I invite you to participate in a research study entitled Having Competitive Balance or Not. The purpose of this study is to find out whether CBA has competitive balance or not? If they do, what are the competitive balance problems? What are the causes of these problems? If they don't, why is there no competitive balance? This study is looking to interview 3 – 6 experts or scholars who are not affiliated with the CBA but with rich knowledge and understanding of the league. Your participation will involve answering questions and participating in a conversation with the researcher and should only take about 30 minutes – 1 hour. General demographic such as age, ethnicity, gender, education level, country, state, city of origin, job level/title, number of years in sports, and research field will be asked. Some sample questions include:

- How do you understand competitive balance?

- Do you think there is competitive balance in CBA or not?

- As a legal expert or scholar, do you think the CBA should maintain competitive balance or not?

- What factors do you think limit the maintenance of competitive balance in the CBA?

You will be asked for your name and which organization you work with. If requested, your real name can be changed, and a pseudonym can be used in the published study. As well, if requested, the organization you work for can be generalized to "an organization in the region" so as not to make your participation identified. The results of the research study may be published, but your name or any identifying information will not be used. The study may be published in an academic journal or presented at academic conferences. The interview will be recorded via an audio recording device for the purposes of analyzing the data once all interviews are complete, but the researcher is the only individual who will have access to the audio file, and it will not be released with the study. It will be deleted once the research project is complete.

There are no direct benefits to participating in this research. Your involvement in the study is voluntary, and you may choose not to participate or to stop at any time without penalty or loss of benefits to which you are otherwise entitled. Your participation in this research will not affect your employment status. There are no known risks or discomforts associated with this research.

(If you have any questions about this research project, please feel free to call me at (706) -248-4274 or send an email to wl74386@uga.edu. Questions or concerns about your rights as a research participant should be directed to The Chairperson, University of Georgia Institutional Review Board, at telephone (706) 542-3199; email address IRB@uga.edu.

If you agree to participate in this research study, please sign below:

Name of Researcher	Signature	Date
Name of Participant	Signature	Date

Please keep one copy and return the signed copy to the researcher.

Appendix E – INTERVIEW GUIDE FOR SPORT MANAGER AND COACH PARTICIPANTS

Questions will start specifically to get information about the demographic and background of the managers or the coaches. The following information about that person will be asked: age, ethnicity, gender, education level, country, state, city of origin, job level/title, years working in sports, years working at the CBA level, other positions held. After gaining general information, the interview will turn to open-ended questions. More specific questions will then be asked in relation to the interviewer's job title and to key elements of competitive balance.

1. What is your role within the organization?
    a. What does an average day look like for you?
    b. How does it change throughout the basketball season?
2. What do you think is competitive balance?
    a. Why does it make you think that way?
    b. From what sources did you learn about the concept of competitive balance?
3. Do you think there is competitive balance in CBA or not?
    a. If there is competitive balance, what things does the organization do to maintain competitive balance?
    b. If there is competitive imbalance, what do you think is the cause?
4. What do you think is the general philosophy of the organization when setting rules and regulations?
    a. Do you think these philosophies are actually implemented?
        a) If so, in what ways?
        b) If not, what prevents it?
    b. Do you think these philosophies are helpful to the competitive balance of the league?
        a) If so, in what ways?
        b) If not, why?
5. Do you think the CBA should maintain competitive balance?
    a. It should be maintained. What do you think is the necessity and significance of competitive balance's existence?
    b. It should not be maintained. Why?
6. In what ways do you think the CBA reflects a lack or existence of competitive balance?
    a. What do you think is causing the lack or existence?
7. What do you think the relationship between uncertainty of outcome and competitive balance?
    a. What makes you understand it that way?
8. What do you think the impact of increased or decreased uncertainty of outcome has on the CBA？
    a. Why does it make you think that way?
9. What do you think about the uncertainty of the outcome of CBA games, using the season as the time dimension?
    a. why does it make you think that way?
    b. In what ways is it reflected?
10. Do you have free agency?
    a. How does it do?
    b. What if there is violations?

c. How do you think it will affect the competitive balance?

11. Do you have salary cap?
    a. How does it enforce?
    b. How do you check on that?
    c. What if there is violations?
    d. How do you think it will affect the competitive balance?
12. Do you have revenue sharing?
    a. How does it do?
    b. What if there is violations?
    c. How do you think it will affect the competitive balance?
13. Do you have draft?
    a. How does it do?
    b. What if there is violations?
    c. How do you think it will affect the competitive balance?
14. What do you think the CBA should focus on to maintain or improve the competitive balance?
15. What do you think the competitive balance in the CBA will look like in the future?

To better accommodate the job title of the interviewees, as well as to further incorporate the critical variables of competitive balance and the research questions, I will develop a grid to be used to guide the interviews that follow, as follows.

Variables / Job Title	Talent Distribution	Economic Differences	Other Factors
Management	As a manager, what impact do you think the distribution of talent in the CBA will have on the competitive balance? Why does it make you think that way?	As a manager, what impact do you think the economic differences between clubs in the CBA will have on the competitive balance? Why does this make you think that way?	From the management's perspective, what other factors do you think affect the competitive balance of the CBA?
Coaches	As a coach, what impact do you think the distribution of talent in the CBA will have on the competitive balance? Why does it make you think that way?	As a coach, what impact do you think the economic differences between clubs in the CBA will have on the competitive balance? Why does this make you think that way?	From the coach's perspective, what other factors do you think affect the competitive balance of the CBA?

Appendix F – INTERVIEW GUIDE FOR LEGAL EXPERT AND SCHOLAR PARTICIPANTS

Questions will start specifically to get information about the demographic and background of the legal experts or scholars. The following information about that person will be asked: age, ethnicity, gender, education level, country, state, city of origin, job level/title, years studying in sports, and research field. After gaining general information, the interview will turn to open-ended questions. More specific questions will then be asked in relation to the interviewer's job title and key elements of competitive balance.

1. What is your role within the working organization?
    a. What is your study area?
    b. What is the connection between you and the CBA?
2. How do you understand competitive balance?
    a. Why does it make you think that way?
    b. What is the difference in competitive balance between China and U.S.?
3. Do you think there is competitive balance in CBA or not?
    a. If there is competitive balance, what things does the CBA do to maintain competitive balance?
    b. If there is competitive imbalance, what do you think is the cause?
4. Do you think the CBA should maintain competitive balance or not?
    a. It should be maintained. What do you think is the necessity and significance of competitive balance's existence?
    b. It should not be maintained. Why?
5. In what ways do you think the CBA reflects a lack or existence of competitive balance?
    a. What do you think is causing the lack or existence?
6. What do you think the relationship between uncertainty of outcome and competitive balance?
    a. What makes you understand it that way?
7. What do you think the impact of increased or decreased uncertainty of outcome has on the CBA?
    a. Why does it make you think that way?
8. What do you think about the uncertainty of the outcome of CBA games, using the season as the time dimension?
    a. why does it make you think that way?
    b. In what ways is it reflected?
9. How do you think free agency affects the competitive balance of the CBA?
    a. Why does it make you think that way?
10. How do you think salary cap affects the competitive balance of the CBA?
    a. Why does it make you think that way?
11. How do you think revenue sharing affects the competitive balance of the CBA?
    a. Why does it make you think that way?
12. How do you think draft affects the competitive balance of the CBA?
    a. Why does it make you think that way?

10. What do you think the CBA should focus on to maintain or improve the competitive balance?

11. What do you think the competitive balance in the CBA will look like in the future?

To better accommodate the job title of the interviewees, as well as to further incorporate the critical variables of competitive balance and the research questions, I will develop a grid to be used to guide the interviews that follow, as follows.

Variables / Job Title	Talent Distribution	Economic Differences	Other Factors
Legal experts	As a legal expert, what impact do you think the distribution of talent in the CBA will have on the competitive balance? Why does it make you think that way?	As a legal expert, what impact do you think the economic differences between clubs in the CBA will have on the competitive balance? Why does this make you think that way?	From the legal experts' perspective, what other factors do you think affect the competitive balance of the CBA?
Scholars	As a scholar, what impact do you think the distribution of talent in the CBA will have on the competitive balance? Why does it make you think that way?	As a scholar, what impact do you think the economic differences between clubs in the CBA will have on the competitive balance? Why does this make you think that way?	From the scholar's perspective, what other factors do you think affect the competitive balance of the CBA?

Appendix G - WEIBO POST DATA

Team	Followers	Post Number	Forward	Comment	Like	Sum (LCF)
Beijing Ducks	158000	26	87	992	2374	3453
Beijing Shougang Ducks	332,000	26	345	2278	6278	8901
Fujian Sturgeons	114000	24	56	244	562	862
Guangdong Southern Tigers	1,528,000	16	873	3674	43000	47547
Guangzhou Loong Lions	175000	50	56	1313	3903	5272
Jiutai Rural Commercial Bank Basketball Team	197,600	36	99	1035	3364	4498
Liaoning Flying Leopards	541,000	82	1139	9082	38795	49016
Nanjing Monkey King	136,100	21	38	459	1105	1602
Ningbo Guanchao	6303	16	26	169	398	593
Qingdao Eagles	209000	26	34	375	385	794
Shandong Heroes	93000	19	85	1350	2402	3837
Shanxi Loongs	280000	69	176	2256	5496	7928
Shanghai Sharks	534,800	52	265	2000	5781	8046
Shenzhen Aviators	287,000	75	67	530	1810	2407
Sichuan Blue Whales	88500	12	13	178	414	605
Suzhou Dragons	130000	53	22	434	748	1204
Tianjin Pioneers	88,400	57	42	321	952	1315
Xinjiang Flying Tigers	542000	7	76	495	2206	2777

Zhejiang Golden Bulls	436,000	35	159	1162	3413	4734
Zhejiang Lions	239000	44	93	1923	4202	6218

Appendix H - COMPLETE CONCEPTS OF OPEN CODING

Category	Concept
Level of understanding of competitive balance	Basic understanding
	Familiar with the concept
Definition of competitive balance	Relatively even distribution of strength
	The factors influencing their performance are balanced
	Competition and balance can sometimes contradict
	Different perspectives have varying interpretation
	It evaluates the uncertainty of competition results and overall excitement and suspense
	Don't have the precise words to define it
Existence of competitive balance	Exist but vary in magnitude
	There is a certain level of balancing but there still be a gap compared to more mature leagues
	There have been changes among the top four, top eight, and playoff teams
	Relatively weaker level
	Use logistic regression to predict the winning probabilities
CBA's view on competitive balance	The league's organizers are continuously striving to promote it
	The CBA has been making efforts to enhance the excitement of the matches and increase their commercial value
Reasons for the lack of competitive balance in the CBA	Players' influence or rights may be weaker in terms of competitive balance
	Lack of separation between management and administration
	Each team is not an independent, market-oriented entity
	Player mobility is low
The impact of competitive balance on the CBA	It's a positive aspect of the league
	The CBA should strive to maintain competitive balance
	Attract more people to pay attention to the league
	Attract more young basketball players
	It's crucial for its future path towards

	commercialization
	Market cultivation and consolidation
	Ultimately aim to ensure the uncertainty of game results
Relationship between competitive balance and uncertainty of outcome	A certain correlation between them on the surface
	To establish a strict relationship between them, extensive data investigation is necessary
	The higher uncertainty of match results, the better the competition balance
	Purpose and means
	Competitive balance is a way to achieve this uncertainty of results
Change of uncertainty of outcome	Stronger than in previous years
	Uncertainty is very high
	Hasn't changed much
Impact of increasing uncertainty of outcome	Make the CBA league more entertaining
	Attracting more spectators, investment, and people from various background
	Positive influence
	People who are not involved in sports, they mention that the CBA seems to become more exciting
Examples of change of uncertainty of outcome	Score difference between teams in each quarter of the game
	This is an objective data-based approach
	Number of championships
Lack of competitive balance	Weak teams intentionally performing poorly
	In the past 10 or 20 years, bottom-ranked teams hard to achieve a good position
	Detrimental to the development of the league
	Match-fixing incidents
	Teams consistently resorted to tanking
Impact of competitive balance mechanism	Promote competitive balance
	There needs to be some data and comparisons
	Helpful but limited
	Increased the intensity and suspense of the games
Purpose of the CBA	Serving and developing talents for national team
	Not solely driven by commercial or economic motives

	Expanding the market
	Solid fan base
	Yao Ming wants the CBA to become a truly standardized and market-oriented professional league
Knowledge of draft system	Its primary goal was to establish a path way for college players to enter professional league
	Own youth training system
	Continuously optimized
Impact of draft system	Not necessarily to achieve competitive balance
	Priority in signing and drafting players, which has negative impact on competitive balance
	Achieve better competitive balance
	Benefit the weaker teams
	It's not an issue with the draft system itself
	The draft system is one of the significant reasons for the poor competitive balance in the earlier stages of the CBA league.
Impact of salary cap	Player salaries deviated from the actual value
	Good system to limit excessive spending and prevent the formation of extravagant teams
	Promote competitive balance
	Place certain limitations on teams with strong financial resources
Knowledge of free agency	Introduced new contract system in 2019
	Few players not affiliated with local sports bureaus who could be considered free agents
	Free agents are rare due to the limited player movement between teams
Impact of free agency	Improve competitive balance to some extent
	Influenced by the overall social environment
	It involves player mobility
Reasons for low player mobility	It involves personal considerations and emotions
	Player may develop a strong attachment to a team
	Besides regular salaries, there may be other benefits or considerations
	Players' future retirement or career prospects
	Not many players who truly want to move
	It may even be influenced by national factors

	and complex historical background
	Private enterprise-led teams generally have more freedom in terms of player transfers
	Teams under the sports bureau are more restricted
	Star players' movement is limited
Impact of low player mobility	Affect players' salary and even performance
	Hinder the timely and effective flow of market factors, which affects competitive balance
Knowledge of revenue sharing	Dividends
	Each team has their own revenue sources
	Sponsor by Li-Ning
	Has been in place for more than a decade
	Each team can receive over 20 million yuan per year
	Impact of pandemic
Impact of revenue sharing	Promote overall competitive balance
	Positive influence
	Help maintain the team's expenses
	Related to performance, including the club's operational condition
	I don't think revenue sharing system in the CBA league effectively promotes competitive balance
Knowledge of talent distribution	Hierarchical model
	Disparity in talent distribution is quite significant
Geographical impact on talent distribution	Northern regions relatively has more basketball talent because of factors such as physique and athleticism
	Western regions may lag behind in terms of talent development due to lower economic development
	There is a trend of population migration within the country
	Southeast coastal area can attract more talent
Impact of talent distribution	I don't think it's entirely balanced overall
	It does have an impact on competition
	The distribution is increasingly inclined towards teams with better development and stronger talent foundations
	Weaker teams can only rely on college drafts
	Difficult to change within a short period of

	time
Economic disparities	Attractiveness of players
	Overall development of a team
	The team may rely on limited players
	Relatively smaller impact compared to talent distribution on the CBA league
	Shanghai transformed from a mid-tier team to a top-four team
	It highlights the negative consequences of not implementing effective revenue sharing
Additional factors impact competitive balance	Foreign player policy
	Overall management of the CBA
	Establishment of players' union
	Positioning of the clubs
	Complexity in the background of the clubs
	Organizational structure and management of the league
	Lack of commercialization and market-oriented approaches
	Negative play
	Expanding the market
Future of CBA's competitive balance	Can't predict
	Increasing equilibrium
	I don't think competitive balance should be the sole pursuit of a league
	Gradually return to normalcy
Suggestions for the CBA	Separation of management and operations
	Draft system deserves particular attention
	Strive for faster marketization
	Ensure the talent circulation
	Team revenues
	Encourage underdeveloped areas in basketball to collaborate more with sports authorities and basketball association to unearth outstanding talent
	Youth basketball competition
	Referees and severity of punishments
	Draft reform is crucial and one of most effective means to enhance competitive balance
Foreign player policy	Influenced the dynamics of the game and the overall structure of teams
	From a market perspective, I believe having more foreign players and increased playing

	time could be a good thing.
Promotion and relegation system	It would not only affect the level of competition but also have consequences for the participation of relegated clubs and their relationship with local sports authorities and basketball association
	Weaker teams may resort to tanking
Powerhouse team	There are always powerhouse teams in every league
	The existence of powerhouse teams does not necessarily mean a lack of uncertainty.
	The Celtics and the Lakers
	Good checks and balances
Attribute of the CBA	Semi-commercialized
	Three-tier network system
	Significant social influence
Uniqueness of organizational structure of the CBA	Natural advantage in recruiting talent
	Limit the movement of players
	Teams like Bayi that exists independently outside the entire league structure
	Ownership of players under previous national sports system
Composition of teams in the CBA	Sports bureau
	Private enterprises
	Combination of both
Content related to competitive balance in social media	Description of victory
	Description of failure
	Challenge
	Description of excitement
	Overtime
	Game-related data