Moneyball's Legacy:

Technological Innovations and Competitive Balance in Major League Baseball

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I. Introduction

Competitive balance has long been a focus of Major League Baseball (MLB). As the only American Canadian professional sports league of the five major leagues without a salary cap or floor, it is often believed that competitive balance is skewed in favor of the large market teams with greater spending power as compared to the small market teams.

As the game of baseball has grown and more teams have entered the mix, the dynasties of large market teams like the New York Yankees appear to be no more. However, public outcry regarding the financial disparity between large and small market teams has been circulating with greater frequency – especially following this year's 'Fall Classic' between the New York Yankees and Los Angeles Dodgers, the two teams with the highest payrolls across the league. The financial dominance of these teams raises questions regarding the fairness within the MLB and how this phenomenon should be addressed, creating conversations of how to 'fix' the competitive gap between large and small market teams center around the idea of a salary cap, a salary floor, or both.

Small market teams are not unfamiliar with these concerns and have found alternative ways to adapt and better compete. Through various organizational and managerial strategies, emphasis on player development, technological innovations, and regulatory practices set by the MLB within the Collective Bargaining Agreement (CBA), certain small market teams have displayed superior entrepreneurial judgement, achieved periods of sustained competitive success while maintaining low payrolls.

The challenge of maintaining competitive balance in the MLB is multifaceted and is an issue that the league has highlighted historically. Competitive balance is defined as the equal opportunity for each team to compete for a championship, regardless of their market size or resources. Large market teams are built to succeed in the present and their financial prowess enhances their ability to acquire top talent. They are teams located in metropolitan areas with large populations and high per capita incomes. Examples include the New York Yankees and the Atlanta Braves. Small market teams are teams located in metropolitan areas with lower Tampa Bay Rays must respond to moves made by large market teams in a way that reflects their inability to acquire star talent on the open market.

The purpose of this study is to explore how small market teams have innovated to compete with large market teams. By examining the successes of select small market teams like the Cleveland Guardians and the Tampa Bay Rays, this paper aims to highlight the effectiveness of small market strategies and argue that small market strategies have evolved to a point where competitive balance between differing market sizes is negligible (possibly say equal, and not negligible?). This study will provide insight into the entrepreneurial strategies of these teams which have allowed them to achieve competitive success in a league characterized as 'top-heavy'.

This study is important to bridge the gap between existing literature regarding competitive balance in the MLB due to the current outlook of the league. Continual advancements in technology and team strategies in the Moneyball era have paved the way for a player analysis and development revolution. Small market teams like the Guardians and Rays who have capitalized on these innovations have laid the blueprint for other small market teams to follow.

This paper will begin with a historical context of competitive balance in MLB, comparing the pre- and Moneyball eras. It will then delve into the specific innovations employed by small market teams, including scouting, player development, technological advancements, and managerial strategies. Case studies of teams like the Tampa Bay Rays and Cleveland Guardians will illustrate these points. The paper will also include an economic analysis of competitive balance and argue against the need for a salary cap or floor. Finally, the conclusion will summarize the key findings and discuss their implications for the future of MLB.

(Possibly will insert/change more to the introduction, we will see)

II. Historical Context

When the MLB focuses on adjusting competitive balance, they define competitive balance as the equal opportunity for each team to compete for a championship. Historically, teams that sit on the higher end of team payroll have produced more championships. The New York Yankees – historically a high-spending team resides in a large-market area – is the team most often discussed in competitive balance literature due to their dominance over many decades in the MLB.

The breakdown of my assessment of competitive balance within the MLB falls into two groups: the pre-Moneyball era and the Moneyball era. The pre-Moneyball era ranges from 1984-2003 and the Moneyball era ranges from 2004-present, following the conclusion of the 2024 regular season.

During the pre-Moneyball era, competitive balance was characterized by the financial capabilities of large market teams. Teams like the New York Yankees and the Atlanta Braves paid for top talent often. In this era, small market teams occupied 20.5 percent of total playoff spots available. With the ability to pay for star talent and the inability of small market teams to adjust their scouting methods or player development methods, these large market teams dominated the

1990s. During this period, the small market teams only occupied 10.7 percent of the total playoff spots despite the playoff picture expanding to eight teams following the 1994 labor strike. With more opportunities than before yet fewer appearances, this short window caused much panic to properly address the competitive balance of the league.

In response to these concerns, the MLB formed the Blue-Ribbon Panel (BRP) in 2000 to distinguish between what makes a large market team "large" and what makes a small market team "small." Throughout their analysis of specifically the 1990s, they found that market size, however it is defined, did not consistently relate to the level of competitive balance within the MLB (Schmidt and Berri, 2002). Small market owners of teams under both the reserve clause and free agency believed that free agency left their teams worse off and unable to compete; however, the BRP was unable to find a noticeable difference.

In their definitions of what constitutes a small market team, the BRP looked at different factors such as population, per capita income of the metropolitan area, simply having a 'large payroll', a large revenue, or a large operating income. They then grouped these factors to be either exogenous to the team – population or per capita income of the area the team resides in – and factors endogenous to the team – payroll and other similar factors which the team exercises some amount of control over. Again, the panel found no relationship between either characterization (Schmidt and Berri, 2002).

Rather, the solution to the leagues perceived competitive balance issue was found in small market teams completely reshaping their approach to talent acquisition with assistance in the form of a league response. This set the stage for the idea of Moneyball. "Moneyball" was the name given to the strategies employed by the Oakland Athletics front office from the years 1999-2003 in which they used data-driven strategies to assess the value an individual player could contribute to the team's win total. The focus of Michael Lewis's publication "Moneyball," the A's sought after undervalued players, or players who possessed these desired traits such as on-base percentage (OBP) as compared to batting average (BA) or home run total. Statistics like batting average and home run total are easily observable statistics in which the impact on team wins is immediately apparent. OBP, on the other hand, is still easily observable, but players with a higher OBP were undervalued, as these attributes are less flashy than a high BA or home run total (Lewis, 2003; Chugani, 2024).

Oakland A's general manager, Billy Beane, used an econometrics-based approach to analyze these individual statistics and their contributions towards team success, successfully building a competitive roster on a reduced budget. In these years, Oakland sported a payroll no higher than twenty-third out of thirty teams yet made the playoffs in each year from 2000-2003. Aligning with the analysis of the BRP, Oakland was the first small market team to break through the perceived competitive barrier.

Other organizations took notice of the continued successes of Oakland. Following Lewis's publication, the Boston Red Sox acquired some front office members from Oakland, employed the same approach in measuring undervalued statistics, and won the World Series in 2004. The data-driven method introduced by the A's and popularized by the Red Sox spread throughout the league, sparking innovation in front offices around the league. Other small market teams sought to emulate Oakland's success by adopting an entrepreneurial approach not yet seen, which brought a new level of strategy to the game (Lewis, 2003).

In the current Moneyball era, small market teams occupied the available playoff spots at an increased rate of 38.75 percent. This variance can be attributed to an increase in the number of available playoff spots per year, but the additional playoff spots in each year give more teams a chance to compete nonetheless. When reducing the window to match that before the expansion in 1995, small market teams have filled 19.3 percent of the available divisional playoff spots in the Moneyball era. However, there is much left to analyze regarding the innovative practices driving this success of certain small market franchises and their ability to sustain success and playoff appearances.[1]

III. Innovations in the Moneyball Era

As displayed by the Oakland A's use of "Moneyball" strategies in the early 2000s, if a small market team wishes to succeed while maintaining a low payroll, it is essential for them to find alternative ways to compete. The free agent market offers more certain success, but the security of greater certainty also entails a much higher price tag.

Though it is the opinion of the lay-man and the typical sports writers and reporters to call for a salary cap or floor in response to their narrow focus on free agency acquisitions, the teams within the league and the league itself does not appear to share these sentiments. Instead, these small market teams recognize this as a feature of the MLB's labor market.

If they invest resources into the development of young players, they can maximize the use of their resources and turn these players into assets in one of two ways – buying low or selling high. By buying low, they are taking the players who are still in the development process and trading them for established players who would otherwise be too costly for them to acquire. They also may sell high at trade deadlines. If a player develops and reaches a high level of performance and is under contract or still falls under team control, small market teams can trade

[1] The percentages used are drawn from looking at the playoff spots in the years prior to 1994, and the divisional rounds in 1995 and on when characterizing the pre-Moneyball and Moneyball eras. When characterizing the large and small market teams, I chose to split them by top and bottom half of total payroll in each league year. Using win distributions may have been better to capture the successes of certain small market teams, however.

them at peak value during the deadline. They can then replenish their farm system, or the lower-level leagues, with these younger players waiting to be developed, keeping a more continuous cycle of talent development.

Recognizing these strategies, small market teams have shifted their focus into four key areas of innovation: scouting and player development, technological advancements, managerial strategies, and lobbying for regulatory practices.

A. Scouting and Player Development

Advanced scouting through analytics began to take swing following Moneyball. Not only was there a push to identify which statistics served as better indicators of success from the minor to the major leagues, teams conducted player evaluations through their marginal revenue product (MRP) and marginal physical product (MPP) (Scully, 1974; Burger and Walters, 2008)

The emphasis on MRP began in 1974 with Scully's paper, *Pay and Performance in Major League Baseball*, and created a spark within sports economics literature regarding MRP and player valuations. Initially a response to the league shift in player acquisition from the reserve clause to the free agency era, Scully's analysis was popularized, and his framework was reused by teams to analyze the total MRP players were contributing to their team. Teams then adjusted to pay players according to their MRP valuation by analyzing which aspects were possibly undervalued from the physical product they could put on the field (Kahn 2000, ?).

Hayek also emphasizes the importance of competition as a rivalrous discovery process in which teams use localized knowledge to make decisions that impact the overall efficiency of the market (Hayek, 1946). The league's decision to not implement a salary cap or salary floor following the decision of the BRP indicates their understanding that teams have access to information regarding the players, and acting as a single person or central authority who possesses all the information by instructing teams how to conduct themselves would be detrimental to competitive balance. By shifting their player analysis approach to the methods discussed by Scully and others, teams better developed their local knowledge to make decisions of which players to employ. Information proved to be more powerful than money in the years when the A's were consistently competitive, and gaining a leg up on the competition meant acquiring as much information as possible. Despite these large market teams having more financial resources, the David and Goliath dynamic for differing market sizes once believed to be so prominent now appeared manageable.

This analysis has also been used to show that, in a Coasean manner, the mobility of players under the reserve clause was no different than the allocation of players in the free agency period, so long as there is perfect information and transaction costs are negligible (Schmidt and Berri, 2003; Kahn, 2000; Fishman, 2003). Nothing was determined from various research to have determined a shift in competitive balance from the reserve clause to free agency – meaning that teams who could afford to buy up star talent did not seemingly gain a new advantage when able to wield their spending power.

What was affected during this time was the available substitutes for star talent, as teams began to expand their scouting efforts internationally (Fishman, 2003; Schmidt and Berri, 2003). While the top teams would expend more resources by recruiting the sure talent on the free agent market, small market teams would expend more resources into foreign labor markets. This strategic shift allowed small market teams to discover and develop cost-effective talent that larger market teams might overlook.

Small market teams, then, minimized transaction costs by investing more into scouting practices and gaining expertise to identify this undervalued talent on top of the emphasis placed on MRP and MPP evaluations. With the labor pool expanding to include more international players, small market teams were able to successfully gain competitive ground with the large market teams by bringing in more talent to the league rather than only identifying the talent within the league.

Teams who have been especially good at identifying international players from a young age include the Tampa Bay Rays and Cleveland Guardians, who have discovered and developed key players within their organizations through these efforts. With the transition to more data-based approaches to evaluate players Moneyball, the approach modeled by these teams aligns with the Coasean principle that the distribution of resources remains balanced if teams can efficiently allocate their resources to maximize value.

B. Technological Advancements

Now recognizing the importance of collecting information, teams began to look to increasing technological methods to analyze players as well. The "sabermetrics" era which blossomed Moneyball encouraged teams to gather as much data as possible on a player to evaluate how they could take certain attributes a player possessed and develop them to the best of their ability. Teams shifted focus Moneyball from statistics like OBP, BA, and walks, and began taking highly specific measures to quantify how a player could contribute to their overall team success. This was found through more technological tools and advanced analytics platforms to receive more detailed feedback.

The analysis of Scully grafted to other ways to measure a player's performance and MRP to avoid overpaying talent that met the traditional eye test of player evaluation is one way in which teams mitigated the financial disparity through analytics. However, the focus now is not one of MRP analysis, but of specific technological tools used for player tracking and performance metrics.

Through different pitch tracking systems developed early in the Moneyball era in 2006, like TrackMan and PITCHf/x, teams and individuals were able to track their pitch speed, spin rate (also referred to as RPM), and movement of pitches with a frame-by-frame analysis of each pitch thrown (Baccellieri, 2023). By taking a frame-by-frame analysis, players and teams were able to calculate the spin efficiency of pitches, mitigate errors such as 'tipping pitches' (which is an indicator from a movement the pitcher makes differently on different pitches, giving the batter an advantage in the at bat), calculate the optimal arm angle to pitch from – which varies for each individual – to increase RPM, making pitches harder to hit, and discover how to tweak pitch grips to increase RPM.

The MLB initially contracted with PITCHf/x to provide each team with this technology, and later, other companies began to develop their own version of this technology to provide more specialized data. Tools like TrackMan and Rapsodo are other examples of pitch tracking systems which have become integral to player analysis in baseball. Through the use of many high-speed cameras, the players and coaches can better make decisions backed by data for individual matchups resulting in a greater likelihood of success. The aforementioned tracking of RPM reflects the possibilities opened up by TrackMan, as well as the enhanced accuracy of tracking the vertical and horizontal breaks from pitches. Rapsodo, on the other hand, allows players to adjust their pitching mechanics in real time by providing feedback during practice sessions as compared to film review following a game or practice session (Baccellieri, 2023).

One of the main technological advancements during this time which benefited small market teams was the introduction of Statcast, which was the replacement system for PITCHf/x by the year 2015. The MLB entered into a new contract with Statcast which integrated a radar system with enhanced camera technology. Additionally, contracting with Statcast gave the MLB more freedom to develop these technologies and emphasize frame-by-frame breakdowns of the game for better data collection. This new technology allowed for more in-depth batting analysis, tracking bat paths, exit velocity, launch angle, and whiff rates. Combining all of these metrics to analyze the tendencies of their players, teams were able to provide players with better knowledge of what pitches they struggled with beyond not seeing a certain pitch well, or not seeing a certain pitcher well.

Blast motion sensors, though not developed with Statcast, are an additional tool which has been produced that complements the Statcast technology. These sensors have been utilized by teams and individuals for certain swing metrics like bat speed, attack angle, and time to contact to allow players to adjust and track the progress of their adjustments over time. This technology has been especially popular for player development for players in the minor leagues looking to make each tier of the minor leagues and the jump to the major leagues at a faster pace.

Different fielding metrics have emerged in the Moneyball era as well to better assess the MPP each player contributed to their teams when playing defense. Some of the most noteworthy defensive statistics include Defensive Runs Saved (DRS), Ultimate Zone Rating (UZR), and Fielding Independent Pitching (FIP). DRS measures the number of runs an individual player saves by certain defensive plays he makes, like an outfield assist throwing a player out at home.

UZR measures how well a player covers a certain zone of the field, which shows a player's ability to cover ground to convert a batted ball into an out instead of a hit. FIP is used to measure a pitcher's ability to record outs without the assistance of the defense, focusing on his control, or the ability to throw strikes or balls, and calculates home runs given up.

Lastly, the data revolution in baseball has allowed for better tracking of player health related to injuries and availability. With the introduction of more wearable technology, such as Catapult and Zephyr, which track players' movements, workload, and susceptibility to injury as a result, and the high-speed cameras which also capture players' movements to identify ways they could adjust and mitigate injury risk, availability for the player has increased. There is also technology that helps to quicken the healing process from differing fatigue and soreness that has been developed, such as the Marc Pro, which is an electric stimulation device which creates non-fatiguing muscle contractions to help relieve soreness, facilitate blood flow, and works for any muscle group.

C. Managerial Strategies

As mentioned by the BRP, teams who struggle to compete suffer from poor management. The manager and his surrounding staff are integral to the success of the team through due to their discretion and differing managerial strategies. With the plethora of data available to track players in baseball now, managers can better utilize this knowledge to command his respective team.

Managerial efficiency in decision making makes all the difference in enhancing or hampering team performance. The tactical decisions the managers face can be in the hundreds for an individual game. These decisions can be regarding lineup construction, bullpen management, starting pitching rotations, substitutions, defensive alignments, and so on, all of which have a demonstrable effect on winning beyond what team payroll indicates (Schmidt and Berri, 2006).

There is also a significant increase in individual player performance as a result of managerial decisions which shows that players perform better under more effective managers due to better motivation and role optimization. This is likely due to the better managers acting as better talent developers, helping young players refine skills and veterans maintain higher performance through strategic positioning and superior mentorship. For small market teams especially, this is incredibly important because the manager's pay does not fall within the payroll for the team. Paying more for a manager who demonstrates superior judgement and efficiency in his decisions for the team would then bring substantial returns to the team due to the increased number of wins.

The common man's conception of team success relies mainly on player success. Managerial success combined with technological innovations from the data revolution allow for better management to become far stronger as a result. The salaries of managers also reflect market-based valuations of their expected contribution to the team's overall performance, showing that small market teams are not as hampered by their inability to pay for talent in the present.

D. Regulatory Practices

As the landscape of the league has continued to change and evolve during the Moneyball era, the MLB has shown that they will implement regulatory practices in each iteration of the Collective Bargaining Agreement (CBA) to ensure a greater competitive balance. The latest 2022-2026 CBA introduces several key changes aimed at addressing disparities in team financial resources, providing fair compensation for players, especially those in the early stages of their career.

For example, when the Oakland Athletics lost the reigning American League MVP Jason Giambi to the New York Yankees in the free agency period following the 2001 season, the Athletics received compensatory draft picks because he performed at such a high level. Specifically, they received a first-round draft pick for the 2002 MLB Draft as compensation for losing Giambi (Lewis, 2003). This system has continued to change regarding compensatory picks, with a qualifying offer added in the 2012-2016 CBA to give the team the player was leaving in free agency a final opportunity to sign the player and retain them. If the player still chose to leave, the team he signed with forfeited its highest available draft pick. The qualifying offer changed yet again in the following CBA, with the forfeiture of the new teams draft picks tying into the contract offer and the revenue sharing status of the original team (Euston, 2021).

One significant change in the new CBA is the adjustment of salary structure to better reflect the contributions of younger players. The younger players outlined are players with less than three years of service time who may not be paid their MRP. The league tries to adjust for this if these players contribute to a greater team win total through certain playoff incentives. In the most recent CBA, this increased from awarding 50% to 60% of the total gate receipts for the first two Wild Card games to the players with a maximum of $100,000 per team (Cooper 2023).

The league has also adjusted the Pre-Arbitration Performance Bonus Program. At the beginning of each MLB season, there is $50 million set aside to designate players still in their arbitration years, which simply means player who are in the early stages of their contract before an extension and receive the league minimum on a rookie deal. In the example used by Cooper, Corbin Burnes, former pitcher for the Milwaukee Brewers, would receive $2.5 million from the commissioner’s office of this $50 million pool because he placed first in the NL Cy Young Award voting (the award given to the best overall pitcher in the National League) in 2021 while still in his arbitration years (Cooper, 2023).

While the first two changes discussed do benefit all players, the league has cracked down on large market teams to a greater extent. Within the CBA, there is a revenue sharing process where the teams who spend more than a certain amount on their payroll are charged according to which spending threshold they fall into. In the current 2022-2026 CBA, the tiers for the previous season are: $257 million in tier one, $277 million in tier two, and $297 million in tier three. Tier three is a new addition to the current CBA. The surcharge for each threshold is 12%, 45%, and 60% respectively. If the amount a team is charged as a result of the luxury tier threshold exceeds $3.5 million, fifty percent of the amount the pays then goes to the revenue sharing system, in which the commissioner’s office determines which small market teams are eligible based on the successes of their marketing tactics to bring a greater fan attendance (Cooper 2023).

The significance of adding a third bracket is increased penalty to discourage large market teams from spending above the second threshold. For some of the larger teams, this surcharge did not appear to be as much of a penalty, but the bump from 45% to 60% may curb the spending tendencies of these teams, as more money would then be redirected to some of their small market competitors who have sustained periods of greater fan attendance, such as the Cleveland Guardians.

The MLB’s regulatory practices also extend to signing bonus pools for both domestic and international players. Each pick within the first ten rounds of the MLB draft has an assigned value or a “slot”, and teams face penalties which can be monetary or loss of future draft picks for exceeding this slot. This system ensures that teams adhere to the signing bonus pools, and players do not hold out for larger market teams who may be able to grant them a larger signing bonus. For the international players, the signing bonus pool varies with respect to each team's market size and total revenue. Small market teams receive a greater amount towards their signing pool for international players, and there are many restrictions on what teams can offer an international player, ensuring large market teams do not engage in contract extension talks prior to the player signing his initial contract. These funds are also tradeable, meaning that if a small market team recognizes they will be out of the hunt for an international player, they may trade this money to another, likely large market team, so they may offer him more money initially in the hopes to sway said player to their organization (Cooper, 2024).

IV. Small Market Case Studies

A. Tampa Bay Rays

In the Moneyball era, the Tampa Bay Rays have shown themselves to be a successful team possessing a front office and management with superior entrepreneurial judgement with a reliance on data innovations in the Moneyball era. Even in the face of financial constraints, the Rays have competed at a high level, reaching the playoffs repeatedly during this stretch. This section will briefly break down the areas in which the Rays have served as a model of a successful small market team.

The Rays front office during the Moneyball era has been exceptionally good at identifying undervalued talent. An example of this is when they traded their star starter, Chris Archer, for a return of prospects Austin Meadows, Shane Baz, and Tyler Glasnow. Following the trade, Archer struggled, while Meadows and Glasnow both blossomed into important pieces, propelling the Rays to the playoffs in their years with the team. After developing both Meadows and Glasnow, Tampa Bay traded both of these players again (Justice, 2019). Tampa Bay is known as an organization which plugs in various players, but succeeds, nonetheless. For the players who filter through, this does not bother them because of the Rays' exceptional player development which provides opportunities for second contracts with other organizations, as an organization like the Rays allows a player to better market themselves.

Because the Rays have been successful at replenishing their farm system after successfully identifying and developing good players like Randy Arozarena, Blake Snell, Yandy Diaz, and so on, it has allowed them to continually flip these players for a younger return and prolong their successful seasons through an emphasis on player development on a diminished payroll. Arozarena broke out in the playoffs, commanding a large return for the Rays because of his ability to play under pressure. Snell was drafted by the Rays, developed into a Cy Young Award winner, and traded for a large return, and Yandy Diaz was acquired from the Guardians in a trade which the Rays definitively won due to Yandy Diaz's continued successes and the Rays keeping him past the midseason trade deadline this past season.

The Rays also introduced the idea of an "opener" which is using a pitcher who would typically come in relief for the starting pitcher later in the game during the opening batters of the game as a get-me-across past the toughest portion of the lineup, mitigating any damage early on. This strategy was so successful because, for example, the Rays could use a left-handed "opener" and then switch to a right-handed starting pitcher, forcing substitutions from the opposing manager earlier in the game to burn their more favorable platoon matchups (platoon players are players who bat exceptionally well against pitchers of one hand, yet struggle against the other) (Justice, 2019).

The Tampa Bay Rays have demonstrated that with innovative strategies, a keen eye for undervalued talent, and a robust player development system, small market teams can achieve sustained success even in the face of financial constraints. Their ability to consistently compete at a high level, reach the playoffs, and develop players who perform under pressure underscores the effectiveness of their approach. By pioneering strategies like the "opener" and excelling in trades that bring in promising prospects, the Rays have set a benchmark for other small market teams. Their success story is a testament to the power of data-driven decision-making and entrepreneurial judgment in modern baseball.

B. Cleveland Guardians

As for the Guardians, their success stories have been slightly different. The Guardians have experienced the most success leaguewide at drafting players and developing these players to the professional level than the rest of the league. With the successes of the front office accompanied by superior managerial performance and heavy use of analytics for the last ten years, the Guardians have also experienced greater rates of long-term competitive success.

For example, the Cleveland Guardians hired manager Terry “Tito” Francona prior to the 2013 season for his success as a manager of the Red Sox, helping them secure two World Series championships. The Guardians reached the postseason under Tito in his first year as manager, returning to the postseason five more times in his tenure as manager. Known as a players’ manager, Tito was instrumental in the organization’s success due to his superior entrepreneurial skills assessing players and putting them in favorable matchups, bringing out the best in generational players like Jose Ramirez and Francisco Lindor.

Additionally, his management of the starting rotation as well as the staff he surrounded himself, namely Carl Willis, helped the starting pitching staff excel. The addition of Trevor Bauer, who was heavily involved in the data revolution surrounding pitching, using technology like Marc Pro, TrackMan, and Rapsodo, helped the Guardians pitching staff immensely during this time, as not many teams placed as much emphasis on this new technology as Bauer did (MarcPro, 2021; Lemire, 2017). He was regarded as a mentor to many during his time with the organization, and with Carl Willis, one of the best pitching coaches in the league, the pitching staff was the cornerstone of the organization (Bell, 2024).

During Tito's time as manager of the Guardians, he was one of the highest paid managers in the MLB because of his superior managerial quality and decision making. Cleveland understood the importance of managerial quality and its impact on team success, which accounts for their willingness to invest more money into a manager while maintaining a much lower payroll.

V. Economic Analysis

A. Labor Market Dynamics

Small market teams will often prioritize long-term success over winning in the present due to their financial constraints. The focus for these teams becomes developing young talent through their farm systems, making timely and strategic trades to capitalize when they have a better window for contention. This approach contrasts with large market teams, who will often sign more expensive and proven talent through free agency, or trade for these players from small market teams out of contention or looking to offload unfavorable contracts at the deadline.

Though there is inherent incomplete information in any transaction involving a player moving from team to team, the player market operates effectively within this framework (Vrooman, 1996). Over time, small market teams have improved their competitive standing by heavily investing in player development and leveraging advanced analytics to gather comprehensive data on each player.

Small market teams shifting their focus to player development and leveraging information reflects a market adaptation which arose from the beginning of Moneyball. By doing so, they mitigate the risks they are taking when dealing with or acquiring players from the large market teams, allowing for more informed decisions in their transactions. Because each team individually assesses how they wish to develop player and often specializes in developing certain positions, it allows them to be more flexible with dealing certain prospects, or even dealing active players who have developed and are under contract because of the plethora of prospects below them. Allocating more resources into the scouting departments is also a likely characteristic for the successful small market teams, because they are looking for long-term success through player development. For the large market teams focused on success in the present and exhibiting a high time preference for winning, they must look at more finished products.

Borrowing Becker's framework, the small market teams place greater emphasis on investing human capital through development due to the importance of enhancing the skills and potential of their players. This translates to investing in player development programs and scouting systems. By doing so, these teams can achieve long-term success and remain competitive despite financial constraints. Becker's theory suggests that the returns on investment in human capital can be substantial, as developing a player's skills can lead to improved performance and, consequently, better team outcomes. This strategy is particularly crucial for small market teams, which may not have the financial means to acquire top-tier talent through free agency but can build a competitive roster by nurturing and developing their own players, utilizing their less valued prospects or excess supply of a certain position to flip for pieces they deem more desirable.

B. Financial Implications

Though often criticized for being financially prudent, this is the model that successful small market organizations like the Guardians and the Rays have stuck to. The cost-effective strategies they focus on through player development allow for sustained success as compared to short-term success when small market teams attempt to compete with financial muscle for a more limited window (Burger and Walters, 2008).

When small market teams expand their financials and operate as though they were a large market team, they risk paying players more than their MRP to the team, because MRP for each player varies with the market size of the team they play for (Burger and Walters, 2008) This is referred to as the "winner's curse" in which large market teams may find themselves locked into a contract with a player who did not meet expectations and is highly detrimental to small market teams if they must extend the contract over the years.

The marginal win value (MWV) also differs with market size for teams, with the revenue a large market team brings in per win being greater than the revenue a small market team brings in (Burger and Walters, 2008 p. 233). This reflects why the large market teams prefer to win in the present and will spend more to field a more competitive team – at least on paper. The small market teams respond by focusing on homegrown talent, which is more cost effective and aligns with their tendencies to develop players.

C. Market Size and Free Agency

Market size significantly impacts a team's ability to acquire and retain top talent. Large market teams can offer lucrative contracts to attract star players, while small market teams often rely on trades and developing homegrown talent. Although free agency seemingly exacerbates the issue of competitive balance, these practices reflect the demand for these stars in larger markets and the wages they command as well (Vrooman, 1996).

For example, the Tampa Bay Rays and the Cleveland Guardians have successfully used this strategy. They trade players who are nearing free agency for younger, cost-controlled players who can contribute to the team's success in the long term. This approach allows small market teams to remain competitive despite their financial limitations. Additionally, by investing in player development and scouting, these teams can identify and develop talent that larger market teams might overlook because they are not yet ready and still need time in the farm systems.

VI. Arguments Against a Salary Cap/Floor

Despite the absence of a salary cap or floor, several small market teams have achieved significant success. These teams have demonstrated that innovative strategies and efficient management can overcome financial disparities. For instance, the Tampa Bay Rays and the Cleveland Guardians have consistently competed at a high level, reaching the playoffs and even the World Series, without the need for salary regulations.

Zimbalist provides examples of small market teams that have succeeded without salary regulations, arguing that a salary cap or floor is unnecessary. He highlights how these teams have used innovative strategies to remain competitive, such as focusing on player development and making strategic trades.

Implementing a salary cap or salary floor could result in unintended consequences on competitive balance, potentially reducing the incentive for small market teams to innovate and create a homogeneous competitive product. In this instance, labor market dynamics for the small market teams would potentially be disrupted.

For example, let's pretend that the league implemented a salary cap of $150 million per team. For the large market teams like the Yankees or the Dodgers, both teams whose payrolls are almost double this number, would be forced to reduce their spending and forgo signing certain players. Though this would mean more proven talent could be available on the free agent market, the players would suffer as a result, potentially not receiving the wage they could command on the open market. Though the small market teams would benefit from spending less on talent and the ability to shift their business model to recruit more talented free agents, it would make bad contracts where players underperform almost impossible to move away from. It could also result in the small market teams who still choose not to spend more than they currently do receiving a diminished return for a talented player or prospect they possess, limiting player mobility overall.

On the other hand, if the league chose to implement a salary floor, say, $100 million per team, the direct harms for the small market teams are much clearer. Small market teams who typically spend less than this amount would potentially forfeit any revenue they would make for the season by spending the additional money, or possibly result in them making less strategic spending decisions on players who underperform with their given contract. As a result, these players would also be difficult to move, but the small market teams instead bear the burden.

Additionally, this could force the small market teams to divert funds they would typically invest in player development, scouting, and marketing tactics, resulting in less skilled rosters for the small market teams and less opportunities to develop prospects as cost-effective players, or an asset in a trade for another player from the larger market teams. The lack of innovation would be more visible for the small market teams under a salary floor because the league would be making centralized decisions, disrupting the allocative efficiency the league currently has.

For the large market teams, under a salary floor, their recruitment strategies used presently for free agents would be largely undisturbed. The issue would be more apparent in trying to trade prospects for a player on a small market team, or a general unwillingness to deal with the small market teams due to the unfavorable contracts a salary cap or floor would bring.

The luxury tax and revenue sharing system the league currently has already acts as a soft salary cap for the large market teams. For the small market teams who have successfully maneuvered the rules and regulations put in place by the league, successfully increasing fan attendance to receive a portion of the revenue sharing, a salary cap or salary floor would force these teams to alter their marketing strategies, likely resulting in lower fan attendance and engagement.

The success of small market teams like the Tampa Bay Rays and Cleveland Guardians demonstrates that a salary cap or floor is unnecessary. These teams have shown that with innovative strategies, efficient management, and a focus on player development, it is possible to achieve competitive balance without salary regulations. Implementing a salary cap or floor could have negative consequences, reducing the incentive for teams to innovate and potentially harming the overall quality of play in Major League Baseball.

VII. Conclusion

Financial differences between large and small market teams have long been described as a defining feature of Major League Baseball's (MLB) landscape. This essay has examined the relationship between league competitive balance and the creative tactics used by small market teams to succeed over the long term. The Tampa Bay Rays and Cleveland Guardians are two examples of small market teams that have successfully competed against their more financially established rivals by looking at the historical background, technological developments, managerial techniques, and regulatory procedures thanks to the data revolution following Moneyball.

Large market teams with significant financial resources have been revered as dominating forces in the MLB in common literature, for their ability to recruit top players and keep their competitive edge. Though the cries to curb the spending practices of large market teams are as loud as ever, the Moneyball era has demonstrated the importance of data-driven tactics, which completely changed how team building and player evaluation were done. Under Billy Beane's direction, the Oakland Athletics showed that even for clubs with little funding, creative, data-driven tactics might level the playing field.

Other small market clubs adopted similar techniques as a result of Moneyball and the A’s success. Player development and sophisticated scouting were essential to this clubs' success. Small market teams were able to find and develop talent at a reasonable cost by concentrating on undervalued statistics and utilizing international player recruitment. The emphasis on marginal revenue product (MRP) and marginal physical product (MPP) evaluations allowed these teams to maximize the value of their players, further enhancing their competitive edge.

Leveling the playing field has also been greatly aided by technological developments. The introduction of pitch tracking systems like TrackMan, PITCHf/x, and Statcast provided teams with detailed data on player performance, enabling more informed decision-making. Wearable technology and advanced analytics platforms have further enhanced player development and health management, allowing small market teams to optimize their rosters and maintain competitive performance.

Another important element in small market teams' success has been their managerial approaches. These clubs have been able to make the most of their resources thanks to effective management, which is demonstrated by excellent player development and decision-making. The Cleveland Guardians' Terry Francona is one manager who has shown how crucial strategic thought and leadership are to long-term success. Regardless of budgetary limitations, these managers have been able to get the most out of their players by surrounding themselves with knowledgeable coaching staff and utilizing data-driven insights.

In order to maintain competitive balance, MLB's regulatory procedures have also changed. Measures to alleviate financial discrepancies between teams and guarantee players receive equitable compensation have been adopted by the Collective Bargaining Agreement (CBA). Among the measures intended to encourage competitive balance are revenue sharing, luxury tax levels, and compensatory draft selections. Small market teams now have more tools and chances to compete successfully thanks to these regulations.

The Cleveland Guardians and Tampa Bay Rays case studies demonstrate how successful these tactics are. Finding underappreciated talent, creating novel tactics like the "opener," and keeping up a strong player development program are all areas in which the Rays have succeeded. To attain long-term success, the Guardians have prioritized excellent drafting, strong management performance, and extensive use of analytics. Both clubs have shown that small market teams can compete at the top level and make it to the playoffs and even the World Series with the correct strategy.

In conclusion, the idea that financial resources are the only factor influencing competitive performance in the MLB is called into question by the success of small market clubs like the Cleveland Guardians and Tampa Bay Rays. These clubs have demonstrated that it is feasible to attain competitive balance without the need for salary caps or floors by implementing creative strategy, effective management, and an emphasis on player development. The capacity of small market clubs to compete will probably be further improved by the ongoing development of data-driven strategies and technological breakthroughs, guaranteeing a more exciting and balanced future for Major League Baseball.

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