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The Nexus of Payroll, Performance, Ticket Prices, and Attendance in MLB

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ABSTRACT

This study uses secondary data from the past ten seasons to explore key issues germane to Major League Baseball. Focusing on attendance, payroll, performance, and the cost of attending, several key relationships were identified. Huge disparities in spending are documented. Perhaps most importantly, there is a meaningful relationship between performance and attendance. Equally important is the relationship between performance and the team's payroll. Other relationships were documented and suggestions are articulated. These suggestions include future research and managerial issues such as the implementation of a hard salary cap.

INTRODUCTION

Sports marketing has surged to the forefront of discussions among marketing practitioners and academicians worldwide. While we would be remiss if we failed to acknowledge that this discipline comprises two primary domains – mainly the marketing of sports products and the marketing of nonsports products via of the creation of a sports overlay – we recognize that the discipline is driven by the spectator sports component of the industry. While the sports that appeal to the marketplace vary significantly from one country to another, two questions continue to emerge. One of the questions that has circulated across the media and the blogosphere in the United States since the New York Yankees cruised their way to the 2009 World Series championship is that of whether or not the wealthier teams are simply buying championships. More succinctly stated: is a team's payroll directly correlated with a team's performance on the field of play?

The second commonly posed question concerns the relationship between winning and attendance. Logic would imply that a winning team represents a superior product. Common wisdom is that consumers – fans in this case – are willing to pay premium prices for higher quality products. Thus two questions emerge. What is the nature of the relationship between the number of games won during the regular season and the number of fans in the seats? And since higher costs generally translate into higher prices, what is the relationship between payroll and the cost of attending an MLB game? In line with these questions is that of whether or not there is a meaningful relationship between the cost of attending and the number of wins accrued by the team.

While questions such as these are relevant to any sport in any country, this study will focus on Major League Baseball in the United States. We begin with a brief look at a major point of distinction between spectator sports and the typical industry such as the automotive

manufacturing sector. With the key difference delineated, the focus then shifts to that of examining the existing literature.

SPECTATOR SPORTS: A PARADOXICAL PARADIGM

In mainstream industry, a higher cost generally translates into a disadvantage. Recently, Ford Motor sought concessions from its labor force so that it would be on a level playing field as it sought to compete head-to-head with General Motors and Chrysler. When the United Auto Workers voted not to grant these concessions, the immediate response by Ford management was that the cost disadvantage under which Ford was operating would have negative consequences in the future. Ironically, such arguments are seldom articulated in professional sports. While the small market teams complain that they are at a disadvantage because they don't have as much money to spend on their labor force, the large market teams continue to entice the best free agents with lucrative contract offers. The New York Yankees' payroll for 2009 was approximately $202 million dollars. This included $35.91 million spent on the top free agents in the off-season signing period, C. C. Sabathia and Mark Teixiera. Yet at the same time, there are numerous examples of teams spending small fortunes on their roster and failing to make the playoffs or even play at a level above the five hundred (.500) clip. One of the best recent examples involved the 2008 Detroit Tigers. After acquiring a bevy of new players including Dontrelle Willis and Miguel Cabrera, the fans' confidence swelled along with the team's payroll. However, the league's second highest payroll at nearly $139 million dollars failed to achieve an acceptable return on that investment. The team won less than 46 percent of its games and fell far short of making the postseason playoffs. Yet the fans' hope prior to the opening game of the season caused ticket sales to increase substantially over the original expectation. So, some might ask if the large payroll creates expectations that result in ticket sales such that a failure to perform on the field does not result in a significant decline that season. Conversely, an overachieving team with a smaller payroll might have more ticket sales during the course of the season. Thus, it could be that performance is a direct influence on season attendance. Such is the paradox associated with professional sports, especially those such as MLB that do not impose a hard salary cap on team payrolls.

Another anomaly is the relationship between price and demand. Higher prices are typically associated with lower levels of demand. Such a relationship may not be the case for spectator sports. However, consumers are known to pay for quality. We pay more for a Lexus than we do for a similar Toyota. The Lexus may be better, or it may simply be perceived as a superior product. Regardless of the reality, Lexus prices are higher. Thus it may be that higher ticket prices are deemed acceptable when those prices can be attributed to the purchase of a superior product. For instance, despite having the highest average ticket price in Major League Baseball ($72.97), the New York Yankees drew the second largest attendance for the 2009 season (3,7819,358), some 42,000 patrons fewer than the league leading Los Angeles Dodgers..

LITERATURE

At the forefront of the literature that explores spending on salaries in Major League Baseball is the book, *Moneyball*, by Michael Lewis (2003). Among the assertions offered in this oft-cited

book is that the baseball labor market is mispriced. As a consequence, it is argued many teams inflate their payrolls in an unproductive effort to improve their performance on the field of play. While it is believed that this has been the case for many years, there is an emerging belief that more attention is being paid to the link between pay and performance. Supporting this premise is the finding that the correlation between a team's payroll and its winning percentage has improved dramatically in recent years (Hakes and Sauer, 2007). In essence, it is believed that this more attentive mindset emerged with Billy Beane's exploitation of this phenomenon (commonly referred to as Sabermetrics) during his tenure as the Oakland Athletics general manager over a five-season period from 1999 through 2003. It is further believed that this mantle has been passed down to Dan O'Dowd, general manager of the Colorado Rockies (Van Riper, 2009). Yet despite this transition, outcry against the big spenders is commonplace. The culmination of the 2009 World Series was often punctuated by accusations that the Yankees bought yet another championship with the best team that money could buy (Reiter, 2009). As such, we have witnessed renewed calls for a salary cap in Major League Baseball (Marchman, 2009).

Why do teams make such a concerted effort to buy talent? It is argued that winning and attendance go hand-in-hand for most teams. However, despite this assertion, it has been stated that the direction of the causal relationship is not so obvious (Davis, 2008). Regardless of this shortcoming, research has shown that fans subjectively evaluate the probability that their team will win a game. And based upon that probability, their decision to attend a game is impacted. Interestingly, Knowles, Sherony, and Haupert (1992) estimated that attendance is maximized when the home team's probability of winning is .60. Another study by Rascher (1999) offered his estimate that it is a probability of .66 that results in the attainment of the maximum number of fans who choose to attend a game. Furthermore, it has been suggested that the correlation between attendance and performance has strengthened in recent years (Schmidt and Berri, 2006).

As early as 1978, the literature on professional sports began to explore the relationship between team payrolls and the cost of attending a game. Major League Baseball has been noted because of the strength of its union (the MLBPA) and the inception of arbitration some thirty years ago. Shortly thereafter, it was surmised that the resultant increases in the salaries of MLB players "have inflated ticket prices" (Staudohar, 1978). There is credence given to the argument that higher player salaries have a direct relationship with the cost of attending an MLB game. In 1998, it was noted that eight of the ten teams with the highest aggregate payrolls were teams that fell within the list of the ten teams with the highest average ticket prices (Fatsis, 1998). More recently, a terse question was posed: "How have player salaries ruined baseball?" The two most commonly articulated replies to that question are that the trend has destroyed competitive balance and that these high salaries have resulted in higher ticket prices (Glazer, 2002). However, there are some detractors to those arguments. The detractors argue that the steep increase in ticket prices is not a result of increased player salaries; rather, it can be attributed to a heightened interest in baseball on the part of the fans and the construction of smaller ballparks – a phenomenon which has essentially decreased the supply of seats available to the fans. So, the argument is that it has been this increase in demand coupled with a concurrent reduction in supply which precipitated the dramatic increases in ticket prices over the past 15 years (Glazer, 2002). Therefore, if we accept a basic premise of macroeconomic theory, then the equilibrium

price should have been expected to creep higher. This is the same argument put forth by Jonathan Mariner, CFO of the Florida Marlins, when he stated that "it's supply and demand. You charge more because you have more demand for tickets…and nicer facilities." Nowhere does Mariner say that ticket prices went up because payroll went up. In fact, he could not offer this as a reason because the Marlins' ticket prices had increased despite a dramatic reduction in payroll (Fatsis, 1998). In an extension of the assessment of the cost of attending, one recent study expanded the focus beyond ticket prices. Coates and Humphreys (2007) used the Fan Cost Index (FCI) as the independent variable. The FCI takes into account the aggregate cost for a family of four to attend a professional sports event in the United States and Canada. Their research covered three of the four major North American leagues (the NHL was omitted). The evidence emanating from this study appeared to document the fact that fans are somewhat ambivalent since the nature of the demand curve was found to be inelastic.

Much of the published material on pricing is from the popular press. One article in *SportBusiness International* offered the assessment that fans are turned off by high prices (Smith, 2005). An earlier article was more critical as evidenced by its title: "Hey Fans, Sit on It" (Swift, 2000). The prevailing argument is that we are witnessing the act of pricing the everyday fan out of the game. Negative commentary such as this led Fullerton (2010, p. 534) to offer his assessment that "price is perhaps the most criticized aspect of the strategies employed by marketers of spectator sports." This begs the question as to whether or not there is a relationship such that higher team payrolls contribute to higher prices that make it more difficult for real fans to attend games as part of the live audience.

RESEARCH OBJECTIVES

Two distinct assessment periods are addressed in this study. First to be examined is the 2009 season. Then the ten-year period from 2000 through 2009 is subjected to the same scrutiny. Thus, any relationships among the variables in the data set are addressed from both a short-term and a long-term perspective.

For both timeframes, the objective is one of identifying relationships between sets of relevant variables that are commonly discussed in the media and by the fans. As such, the seven objectives germane to this study are to determine the nature of the relationship between:

- ✓ attendance and performance (as measured by the number of games won);
- ✓ opening day payroll (measured in constant (2009) dollars) and performance;
- ✓ opening day payroll index (team payroll compared to average payroll) and performance;
- ✓ team payroll (measured in constant (2009) dollars) and ticket prices (in constant dollars);
- ✓ performance and ticket prices (measured in constant (2009) dollars);
- ✓ attendance and ticket prices (measured in constant (2009) dollars); and
- ✓ attendance and the Fan Cost Index (FCI) (measured in constant (2009) dollars).

METHODOLOGY

Data were gathered from an array of reputable secondary sources. These sources include MLB.com, ESPN.com, teammarketing.com, and the United States Bureau of Labor Statistics

(www.bls.gov/CPI/). The data collected covered a ten-season period from 2000 through 2009. The database consisted of the team's payroll and a payroll index. This index was calculated by dividing a team's payroll by the average payroll for the year under scrutiny. For example, the Yankees' 2009 payroll was $201,449,289 while the average team payroll was $88,336,287. The resultant payroll index of 2.28 indicates that the Yankees' payroll was 228 percent of the average team payroll (or 128 percent more) for the 2009 season. Since dollar values are impacted by inflation, the dollar amount was also indexed. By using the Consumer Price Index (CPI), each payroll was adjusted so as to be stated in 2009 dollars. The number of wins and the aggregate home attendance were included within the database. The average ticket price and the corresponding Fan Cost Index (FCI) were gleaned from statistics published by Team Marketing Report. The final piece of data was a dummy variable that was used to indicate whether or not the team had moved into a new stadium at the start of the season. Other than issue of moving into a new stadium which was coded as a binary (0, 1) variable, each of the other variables in the data set produced ratio-scaled data.

When the analyses were performed for the 2009, the current dollar values were used for payroll and ticket prices. When the ten-year assessments were done, current dollars were transformed. In some analyses, the dollar amounts for the years 2000 through 2009 were indexed using 2009 as the base year; thus each measure reflects the equivalent cost expressed in terms of the 2009 dollar. The indexing criterion was the Consumer Price Index (CPI) as of April of the corresponding year.

Each of the research objectives was assessed using bivariate (Pearson) correlation analysis. However, since the data - in essence - represent a census, measures of statistical significance were deemed inappropriate. So rather than report this measure, assessments are made regarding the managerial – or practical – significance of the findings.

RESULTS

A number of the pairs of variables articulated in the research objectives section exhibited correlation coefficients that are best characterized as managerially significant. Such relationships were documented in both the one-year and the ten-year studies.

The initial objective was that of determining the nature of the relationship between a team's attendance and its performance. For the 2009 season, the top performing team with 103 victories and a World Series title was the New York Yankees; the team drew a total of 3,719,358 fans to the park for their 81 regular season home games. This attendance placed the Yankees second in MLB – falling a mere 42,000 fans behind the Los Angeles Dodgers. Conversely, the worst performing team was the Washington Nationals. Their 59 wins translated into a season attendance of 1,817,280. This figure placed the team 25th out of the 30 MLB teams. This anecdotal evidence of a relationship between these two variables is further supported by the corresponding coefficient of correlation. For the 2009 season, that measure was .680 whereas the comparable figure for the ten-year period was .524. The correlation is in the sought direction as there is a direct relationship between the two variables. Higher levels of performance are accompanied by higher levels of attendance. Furthermore, the correlation coefficients are

reasonably high. Yet at the same time, it is apparent that other factors are perhaps even more important. The coefficient of determination (r^2) of .275 for 2009 and .462 for the aggregate period implies that more than half of the variation in attendance is determined by factors other than performance. Still, the results provide some credence to the argument that paying to bring in quality free agents can represent a good investment *if* the free agents contribute to produce a better product on the field of play. This assertion begs the question as to whether or not higher payrolls do, in fact, translate into better performance as measured by the number of wins achieved by the team during the course of the regular season.

Objective two was that of determining the nature of the relationship between a team's payroll and its performance. For the 2009 season, the actual dollar amounts are used. However, for the ten-year study, the payroll figures were adjusted so as to eliminate the confounding impact of inflation. To accomplish this adjustment, the salary data for 2000 through 2008 were indexed using 2009 as the base year. As a result, each payroll figure is expressed in terms of its equivalent value vis-à-vis the 2009 dollar. In each case, a meaningful result was in evidence. For the 2009 season, the coefficient of correlation for the pairing of team payroll and performance was .504. Likewise, the corresponding measure for the ten-year period was .458. Once again, the direction of the relationship was positive and the coefficient was modestly high. Thus, it can be concluded that there is a meaningful relationship that is characterized by higher payrolls producing a higher level of performance on the field. And while there are exceptions to this rule – after all, the correlation coefficient was not 1.0 – teams that spend the least on payroll tend to be among the poorer performers. Furthermore, the stronger relationship in 2009 supports the earlier assertion by Hakes and Sauer (2003) that the ability of general managers to make wiser decisions regarding player acquisition continues to improve. However, it somewhat contradicts research by baseball statistician Tom Tango whose research indicated that the measure of correlation between spending and performance in MLB was .63 (Cameron, 2009).

The third objective used a meaningful manipulation of the salary data. Rather than looking at dollar amounts, a payroll index was calculated. As such, the measure reflects a team's level of spending relative to the league-wide average. The rationale is that it may not be how much a team spends; rather it is how much each team spends in comparison to its opponents that is more important as a mediating variable that impacts performance. As such, a payroll index of 200 is characteristic of a team that spent two times that of the average team on its payroll. Conversely, an index of 50 indicates that the team under scrutiny spent only half as much on its players as did the average team in the year in question. Once more, meaningful correlations were documented. For the 2009 season, the measure was .504. For the ten-year period, it was .465. Interestingly, the correlation coefficient for the 2009 season (.504) was exactly the same as that resulting from the use of the actual payroll. For the ten year period, the use of the index produced a slightly higher correlation coefficient (.465) than that which was achieved when using the inflation adjusted payroll (.458). Each of these measures supports the premise that spending money on player salaries will result in enhanced performance as measured by the team's number of wins.

The fourth objective begins the examination of ticket prices. For virtually every industry, higher costs of production translate into higher prices for consumers. Thus the question is a simple one. Does a higher payroll result in higher ticket prices? Using raw cost data for 2009, the coefficient

of correlation was .836. Similar, albeit somewhat weaker, results were found when the adjusted cost data over the ten year period were used. In that analysis, the value of r was .644. Coefficients of correlation exceeding .8 are rare in this type of empirical study of actual market conditions. But the reality is that the results may surprise few people, especially the critics of Major League Baseball. Those who argue that professional sports are pricing the fan out of the game will point to results such as these while declaring that the high salaries paid to today's athletes are detrimental and may ultimately drive the everyday fan away from the stadium in favor of experiencing the game as a member of the media-based audience.

Objective five involves the assessment of the relationship between ticket prices and performance. Conventional wisdom would lead one to believe that since higher salaries produce more wins, then it is only logical to assume that there would also be a meaningful positive relationship between ticket prices and performance. Such is indeed the case; however, the relationship may not be as strong as one might have envisioned. For the 2009 season, the observed measure of correlation was .400. For the ten year period, prices were adjusted to account for inflation in the same way that payroll data have been adjusted so as to be stated in terms of the dollar in 2009. For this longer period, the observed coefficient of correlation was even lower at .280. These results indicate that there are a myriad of factors other than performance in any given year that influence ticket prices. Some fans appear to receive a bargain while watching higher quality teams whereas other fans pay a premium for tickets to watch inferior teams.

The sixth objective addresses the relationship between ticket prices and attendance. As noted earlier, most industries face the reality that higher prices for their products translate into lower levels of demand. Major League Baseball is not burdened by the reality of an elastic demand curve. For the recently completed 2009 season, the relationship between these two variables was captured by a coefficient of correlation of .596. Using the inflation adjusted prices for the past ten seasons, the comparable measure was slightly lower at .546. Yet the most compelling aspect of these statistics is that the relationship is positive. In other words, higher prices are associated with higher attendance. This might cause one to ponder if higher prices create higher demand or if higher demand drives ticket prices up. Alternatively, the real issue could be that both of these variables are related to performance. A better product sells for higher prices while simultaneously attracting more interested buyers.

The seventh and final objective addresses the relationship between attendance and the Fan Cost Index (FCI). The FCI is a measure that estimates the total cost for a family of four to attend a baseball game in each city. In 2009, the FCI for MLB was $196.89. The FCI not only includes four average-priced tickets ($26.64), but it also takes into account other likely expenditures including parking, beverages, food, programs, and souvenirs (Team Marketing Report, 2009). As might be expected, the FCI is strongly correlated with ticket prices. For example, the correlation coefficient for 2009 was .977. For the 2000-09 period, the measure was .960. Despite these high values, it was decided that this analysis should still be included since many outside observers are quick to include the costs specific to the FCI as factors that might push some fans away. The correlation coefficients resulting from the assessment of the relationship between the FCI and attendance closely approximate those from when ticket prices were used instead of the FCI. For 2009, the figure was .585. As with ticket prices, when the examination

involves a monetary unit over the ten year period, the dollar amount was adjusted to reflect constant dollars. Taking this adjustment into account, the corresponding measure for the ten-year period was .568. Higher values for the fan cost index are associated with higher attendance. Once more, the likely explanation is that better teams can command higher prices for their tickets and for the various concessions sold at the stadium. So if we were to try to assign cause and effect, it is likely that higher attendance is the cause while the higher cost of attending is the effect.

DISCUSSION

Spending on player payroll appears to pay off. However, the overarching caveat is that it is about spending wisely. Expenditures that do not improve the team's performance may go unrewarded at the box office. This confirms the basic premise put forth by Lewis (2003) in his popular book, *Moneyball*. In documenting the success of Oakland Athletics General Manager, Billy Beane, the key was about investing in players that would provide a meaningful return on the investment. Beane put forth the argument that some positions are more valuable than others. Thus, there is more to consider than player statistics. So, two teams with identical payrolls may have vastly different results on the field of play. As noted in the *Wall Street Journal*, "supersize payrolls" do not guarantee a team's success. The 2003 Detroit Tigers paid approximately $1.3 million for each of its victories that season, hardly representing a sound ROI (St. John, 2003).

Further exacerbating the decision to invest large sums of money in long-term player contracts is the reality that the coefficient of correlation for payroll and performance hovers around .5. Undoubtedly, general managers would like to see that number move higher. Of course the critics will tell them that the correlation would be stronger if only they would quit making bad investments. Mike Hampton signed an eight-year contract to pitch for the Colorado Rockies. The first year return on the field of play for their $15.1 million per year investment was a record of 14-13 with an Earned Run Average (ERA) of 5.12. This was followed the next season with a record of 7-15 to accompany his ERA of 6.15. Bad investments have led to teams *dumping salary*. While most MLB contracts are guaranteed, teams either trade high salary players or refrain from resigning them when their contracts expire. One team with a history of dumping salary is the Florida Marlins. In 2009, we saw it with the Cleveland Indians. In the current off-season, there are rumors of the Detroit Tigers shopping players around in an effort to reduce its $132 million payroll.

It might be wise to look at individual teams over time. It could be that the observed relationships are less pronounced in some markets. For instance, the Chicago Cubs – often relegated to being recognized as the *lovable losers* – may find that attendance is relatively stable irrespective of its performance on the field. As such, it might impact the mindset of a team's new owners and general manager as they contemplate investing to bring in free agents or to retain their own players over time. Alternatively, a team like the Detroit Tigers finds that its attendance is strongly tied to the performance of the team. Thus, the onus may be on management to invest in players who can immediately contribute to the success of the team even if they are seeking to reduce the payroll for the 2010 season.

Another key question is one of a lag. Perhaps attendance is more a function of preseason expectations. Teams that are expected to perform well often see dramatic increases in the preseason sale of season tickets, partial season tickets, and individual game tickets prior to the first pitch of the season being thrown. These optimistic ticket buyers may abandon the team such that empty seats for which tickets were sold ultimately count in the attendance figure. Thus, an underperforming team may have a higher level of attendance than its actual performance would deserve – or than it actually drew to the stadium. But some of these buyers will still show up because they bought the tickets even though their expectations have diminished in conjunction with the team's performance. Thus, it might be the following season when the real decline in ticket sales is incurred.

There are also a number of uncontrollable variables that influence performance and attendance. Key players get injured. They cannot contribute, but they still get paid. Players emerge unexpectedly as high performers. Rookies have great seasons or a veteran player has a breakout year. These players may be locked into contracts such that they are unable to reap the rewards that they and their agents feel they deserve. The bottom line is that they produce positive results, often at bargain prices. However, when it comes time for arbitration or free agency, they will be able to reap the benefits of their past production. Going back to Billy Beane in *Moneyball*, he states that it is essential that players are paid for what they can provide in the future rather than what they have done in the past. As a result, older high profile athletes such as Barry Bonds may find that there is little or no demand for their services. Other uncontrollable factors involve the visiting team. A higher quality schedule may bring in more of your own fans whereas a visiting team that travels well may result in an influx of fans of the opposing team. In this era of interleague play and unbalanced schedules, this aspect of the competition varies significantly from year to year.

Major League Baseball does not have a hard salary cap, hence the dramatic disparity in team payrolls. In 2009, the highest payroll belonged to the New York Yankees while the lowest belonged to the Florida Marlins. The difference was a staggering $164,635,289. Part of this difference can be attributed to the ability of large market teams to generate huge sums of revenue from their media contracts. Yet part of it comes from the reluctance of team ownership and management to spend the money required to put a competitive team on the field. This reality has led some observers to offer two suggestions to MLB. First, there should be consideration of the implementation of a hard salary cap. No longer should teams be allowed to spend more than the soft cap stipulates by simply paying a luxury tax. Secondly, if there is a ceiling, there should be a floor. With such a stipulation in place, each team would be required to spend at least the designated minimum amount on its player payroll. The assumption is that they would not want to overpay a group of below average players; therefore they would invest in better players who would help them win more games – and attract more paying customers. While not wanting all 30 teams to end up with a record of 81-81, it is believed that the presence of a ceiling and a floor would create greater parity within MLB. According to Bob DuPuy, the COO of MLB, "There are still concerns at the top and bottom. The goal would be to get a tighter range that would ensure that even more than 20 clubs at Labor Day would still have a chance to compete for playoff spots – that playoff spots are based on skill and talent and blossoming stars and not just on plugging holes with economics" (Wilner, 2006, p. 8).

Properly done, increased spending on payroll manifests itself into a higher quality team. Higher quality means more wins which translate into demand. The resultant increases in demand help to create an inelastic demand curve which in turn provides pricing flexibility (Pan *et al*. 1999; Fort 2004; Coates and Humphreys, 2007). This pricing flexibility produces increases in revenue which allow the team to overcome the cost disadvantage incurred as a result of the increased payroll. A recent article in the *Wall Street Journal* referred to this reality as *Bottom-Line Ball* (Adams, 2007). In essence, this phenomenon is nothing more than a calculation of ROI. But of course, the difficulty lies in determining the value of a player to place in the numerator of the requisite equation. Only recently have we seen an effort to arrive at that bottom line figure. At the forefront of this effort is J.C. Bradbury, author of the book, *The Baseball Economist: The Real Game Exposed* (2007). And as noted earlier, it is generally believed that today's general managers are more adept at making decisions than were their predecessors.

CONCLUSIONS

This study has documented a number of key relationships within the realm of Major League Baseball. However, there are many other variables that influence performance and attendance. For example, a team moving towards 85 victories but still competing for a division championship may draw more fans than a team progressing towards 93 victories while already being eliminated from post-season competition. Future studies should seek to identify and incorporate these variables. It is also evident, just within the data set used in this study, that there is significant multicollinearity. So, in addition to incorporating additional variables, future research should expand beyond a series of bivariate analyses. Multivariate analyses such as multiple regression or structural equation modeling may help to clarify some of the uncertainty by explaining more of the variation in the dependent variables. It would also be interesting to replicate this study for a North American sports league that has had a hard salary cap in place over the past ten years. The dilemma there is that many teams play to near capacity crowds for an entire season. For example, it is hard to imagine a Green Bay Packers' game that is not sold out. Thus, comparing MLB to the NFL might be the proverbial comparison of apples to oranges.

We will never be able to accurately predict attendance at regular season MLB games; however, we will continue to look for models that improve our predictive powers. In doing so, perhaps sports entities can better determine how to better invest so as to improve their product on the field of play and reap the rewards associated with this superior product.

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