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## An Analysis of the Impact of Team Payroll on Regular Season and Postseason Success in Major League Baseball

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### Abstract

Major League Baseball, like other American professional sports, has become a multibillion dollar industry. The institution of free agency has led to the escalation of payrolls and altered the make-up of rosters by dramatically reducing owners' monopsony power. The ability of large market clubs such as the New York Yankees to compete continually for the game's greatest prize illustrates the power of the dollar. This paper examines four distinct periods from 1977 to 2008 in order to assess the influence of pecuniary advantages on regular season and postseason outcomes. Payroll exerts great influence in the regular season, but not in the playoffs. A time series graph of slope coefficients from regression analyses indicates that an additional ten million 2008 dollars produces between one and three wins depending on the season. In addition, we test several other potential indicators of postseason success and find that October baseball is a truly random event.

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“My shit doesn’t work in the playoffs.”

-Billy Beane, Oakland Athletics GM

## Introduction

Baseball has long been the nation’s pastime, but now more than ever it has become a business. When the New York Yankees take the field in 2009 at the new Yankee Stadium, the franchise will be worth \$1.5 billion.<sup>1</sup> The 79 million fans who turned out at ballparks across America during the 2008 season were the most in Major League Baseball (MLB) history, as total league revenue surpassed \$6 billion for the first time. Teams are also spending record amounts: in 2008, ten clubs’ payrolls exceeded \$100 million, previously a benchmark for only the most spendthrift franchises.<sup>2</sup> With payrolls at record levels, critics have suggested that such a wide disparity in spending promotes competitive imbalance in favor of large-market clubs and those run by sportsman owners.<sup>3</sup> The four main professional sports leagues in the United States all have protective measures intended to constrain monetary advantages. Whereas the National Basketball Association, National Football League and National Hockey League all maintain a salary cap, the MLB has only a luxury tax, which penalizes teams with an aggregate payroll exceeding a certain figure.<sup>4</sup> This paper seeks to examine the impact of money in baseball, specifically whether the payroll structure and lack of salary cap fosters a degree of competitive balance that is healthy for the game.

By analyzing the impact of team payrolls on regular season and postseason winning percentages we expect to find that regular season wins are responsive to team payroll, while postseason wins are not. We believe that the nature of the regular season, 162 games over six months, diminishes random elements. In an era in which teams are able to acquire talent via free agency, this should translate into a positive relationship between regular season winning percentage and team payroll. The postseason, however, is more likely to be a random event and thus postseason wins should be unresponsive to increases or decreases in team payroll. We also examine possible explanations for postseason success.

We test our hypothesis by performing regression analyses relating regular season and postseason success to team payroll over four periods: from 1977-1984, 1985-1993, 1995-2000 and in 2001-2008.<sup>5</sup> In section five we analyze the yearly changes in the relationship between regular season winning percentage and team payroll to further explore and explain the changes in the regular season over this period. Finally, in section six, we conclude with an analysis of possible explanations for postseason success. We hope to demonstrate that that one can buy a division title and regular season wins, but one cannot, within reason, buy a World Series.

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<sup>1</sup> Although the Yankees’ franchise was worth \$1.3 billion in 2008, *Forbes* projects that sponsorships and premium seating in their new ballpark will increase the franchise’s value to at least \$1.5 billion by 2009. The Yankee brand alone is valued at \$241 million.

<sup>2</sup> For 1977-2006, we use payroll figures from BaseballChronology.com. For 2007 and 2008, we use the USA Today Salaries Database.

<sup>3</sup> One typically considers owners of sports franchises to be profit maximizers. These owners manage their clubs where marginal revenue equals marginal costs. Sportsman owners, on the other hand, do not maximize profits and instead will operate where marginal costs exceed marginal revenue in the interest of winning additional games. Sportsman owners thus sacrifice overall team value.

<sup>4</sup> While a luxury tax and salary cap serve basically the same purpose, a salary cap (whether “soft” or “hard”) directly constrains the player transactions of a given team, while a luxury tax has only financial implications.

<sup>5</sup> Refer to the beginning of each section for an explanation of why these specific years were chosen for that time period.

## I. The Rise of Free Agency

The 1970s saw a substantial shift in baseball players' labor market rights, as the institution of free agency materialized gradually from 1974 to 1976.<sup>6</sup> Until players were granted the power to become free agents, the league's reserve system precluded players from changing teams unless traded. The reserve clause in the Uniform Player Contract allowed teams to renew players' contracts for the following season at a fixed price. Players were not free to negotiate contracts with teams of their choosing; instead, wages were determined by clubs, as dictated by the monopsony power held over players in the labor market. The rules also prohibited tampering, thus disallowing teams from negotiating with a player already under contract with another club (Rottenberg 1956). Thus, the moment a player signed his first contract, he relinquished his freedom in the labor market and other teams could not bid for his services.

The first step toward labor market freedom occurred in 1973 when players with at least two years of service won the right to salary arbitration. Empowered by this decision, other players began to challenge the legitimacy of the reserve clause. In 1975, the Major League Baseball Players' Union (MLBPA) filed grievances on behalf of Andy Messersmith and Dave McNally.<sup>7</sup> In the resulting decision, arbitrator Peter Seitz voided both players' contracts and declared them free agents: Seitz ruled the reserve clause created only a one-year option, not a perpetual right to renewal (Pappas 2002). With this verdict, players were no longer the exclusive property of the team that drafted them.<sup>8</sup> In 1976, the controversial decision culminated in a new Collective Bargaining Agreement (CBA), which allowed players with a minimum of six years of MLB experience to become free agents. When Catfish Hunter signed with the New York Yankees, he became the first player to sign a multi-million dollar long-term contract.<sup>9</sup>

Labor market freedom remained somewhat confined, although substantial progress was made. The establishment of free agency increased competition in the player market by giving players the option to choose their team.<sup>10</sup> This shift eliminated much of the exploitation that occurred under the previous regime, when teams could routinely pay players at a level below their marginal revenue product (MRP). A flurry of transactions occurred immediately, during which time the average player contract doubled from \$51,000 to \$100,000 (USA Today 2000). The almost instantaneous salary escalation demonstrated to what degree exploitation had existed prior to the institution of free agency. The first era examined in this paper begins in 1977, directly after free agency began.

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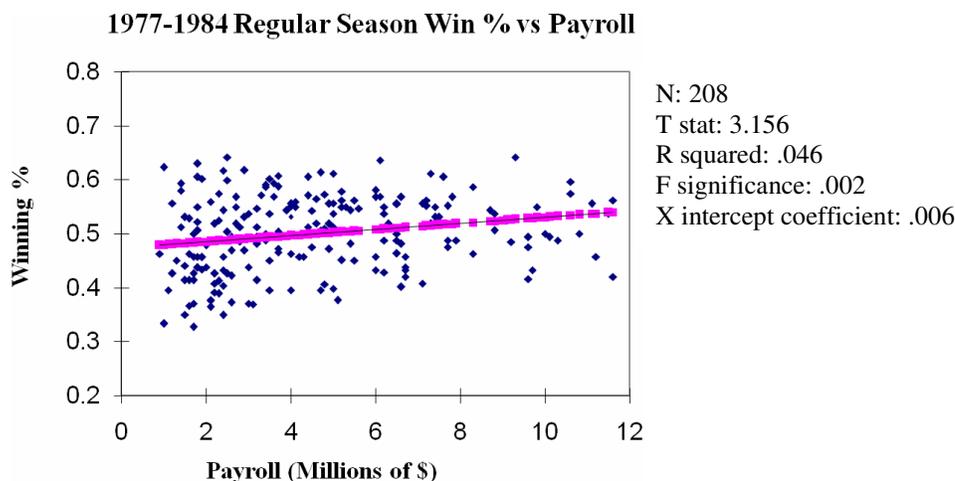
<sup>6</sup> Free agency refers to the ability of a professional athlete to change team on one's own volition after the expiration of one's contract.

<sup>7</sup> McNally did not play another game following the decision, but the outcome of the case has left him with an important legacy.

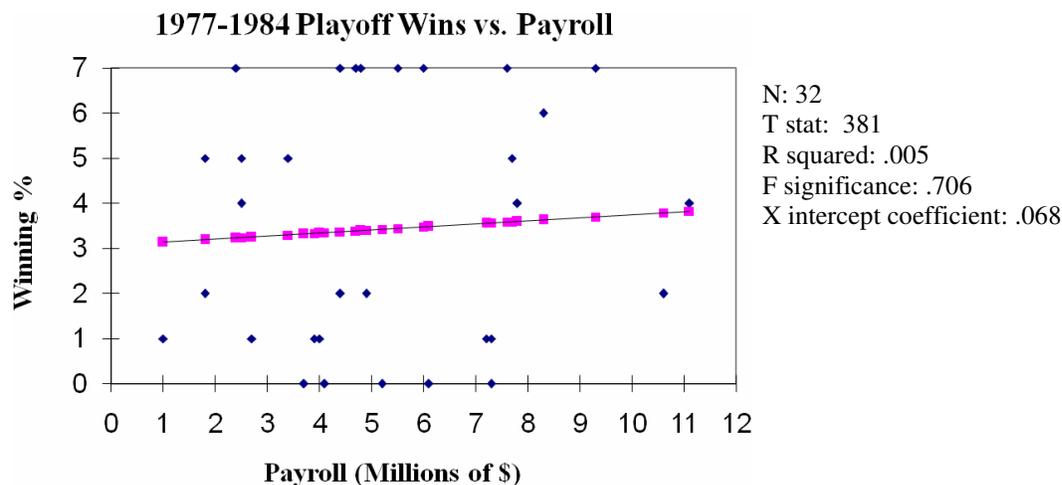
<sup>8</sup> A previous decision, *Flood v. Kuhn* (1972) laid the groundwork for this case. For a more detailed explanation of players' labor market rights, see *General Theory of Professional Sports Leagues* (Vrooman 1995).

<sup>9</sup> As Hunter said in 1987, shortly after being elected to the Hall of Fame, "I was probably the first player who broke it open for other players to be paid what they're worth" (CNNSI 1999).

<sup>10</sup> Free agency in its initial form included several distinct differences from its current form. First, players were only permitted to file for free agency once every five years. As a result, the best players demanded five-year contracts. Second, a maximum of twelve teams could negotiate with any given free agent, and these twelve teams were determined by a yearly draft. See Pappas 2008 for a more complete account of the evolution of free agency.



Based on data gathered on team payrolls and regular season winning percentages we performed a regression analysis relating regular season winning percentage to team payroll for each of the four periods. In the first period the ability of teams to acquire additional talent through free agency suggested a positive relationship between regular season winning percentage and team payroll over a 162 game season. As expected, we found a statistically significant positive relationship between regular season winning percentage and team payroll. The slope coefficient was .0057%.

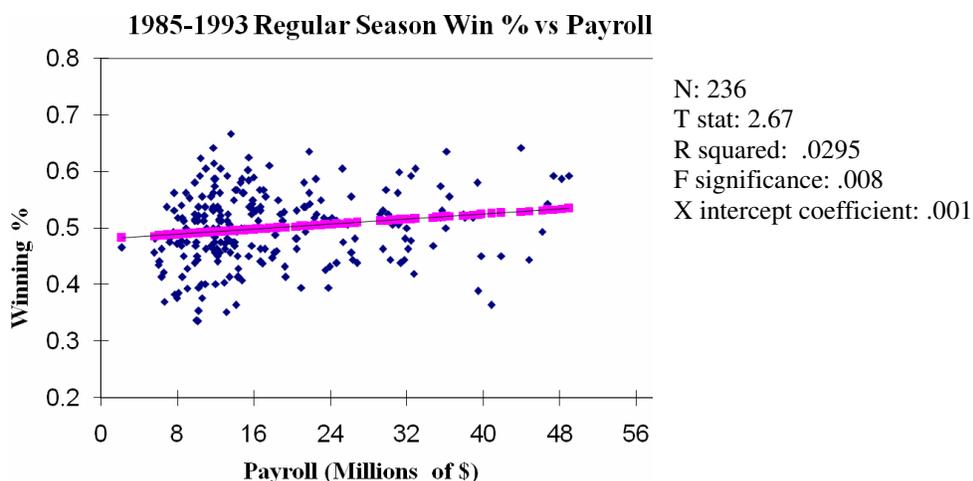


We also performed a regression analysis relating postseason wins to team payroll for teams making the postseason. We found a statistically insignificant relationship between postseason wins and team payroll from 1977 to 1984. Therefore, we cannot conclude that postseason wins and team payroll were related in this period. A short postseason comprised of a five game league championship series and seven game World Series is more random than the 162 game regular season, thus diminishing the likelihood that team payroll will have an effect on postseason wins regardless of the institution of free agency. As evidence of this phenomenon, over the course of this period a different team won the World Series for eight straight seasons.

## II. The Pre-Strike Era

In 1985 the MLB playoff format changed for the first time since 1972: both the AL and NL Championship Series switched from five to seven game series.<sup>11</sup> More importantly, however, the 1980s saw the end of the AL-NL rivalry that defined Major League Baseball for the greater part of the 20th century. Instead, MLB owners began to act as a syndicate. This collaboration became apparent from 1985 to 1987, as the players' union filed three different grievances relating to collusion among owners. The free agent market following the 1985 season featured several top-tier players such as Kirk Gibson and Tommy John, neither of whom received offers from other teams. After the following season the average MLB salary fell for the first time since free agency, decreasing from \$412,520 to \$412,454. An arbitrator determined that franchises collaborated illegally to stifle free agent offers and a rise in the value of player contracts. The final settlement for the three collusion cases amounted to \$280 million in damages.

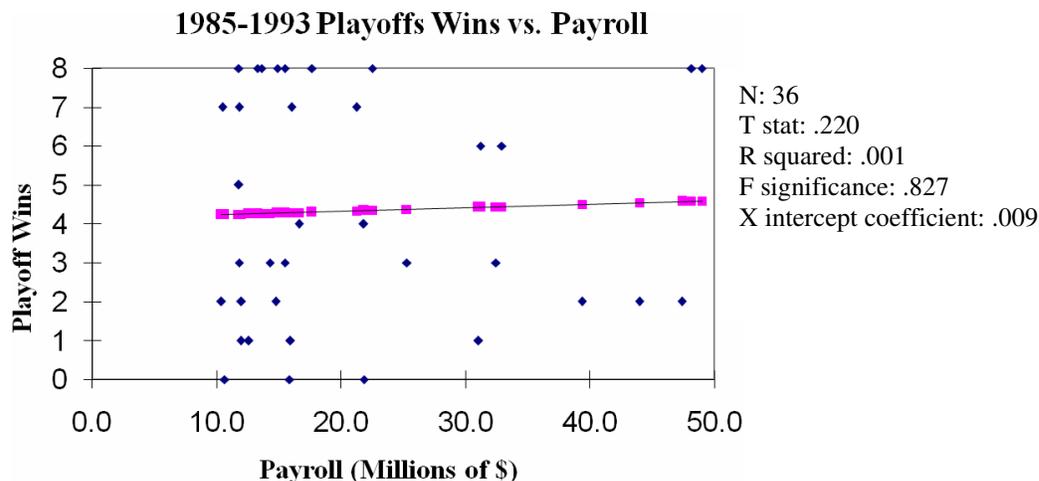
Following the collusion, owners began to break from their cartel, leading to an unprecedented explosion in player salaries: from 1990 to 1991, the average MLB salary rose from \$578,930 to \$891,188. Two seasons later, the average salary had risen 86 percent from its 1990 level to \$1.109 million. The institution of free agency led teams to rely on players who had developed in other clubs' farm systems. This dependency on the external market produced acquisitions in which clubs who won free agent auctions routinely overestimated players' MRP. John Vrooman has labeled this phenomenon the winners' curse (Vrooman 1996). *Inter alia*, two large market clubs, the Los Angeles Dodgers and New York Mets experienced historic collapses after signing several high-priced free agents. This enormous rise in salaries set the stage for the eighth work stoppage in baseball history: a strike which began on August 12, 1994 and wiped out the remainder of the regular season and the entire playoffs, including the World Series.



We performed a regressions analysis relating regular season winning percentage to team payroll from 1985 to 1993. From this analysis we found a statistically significant positive relationship between regular season winning percentage and team payroll during the period. The slope coefficient was .0011%. The strength of the relationship between regular season winning percentage and team payroll was slightly weaker than in period one, suggesting that collusion from 1985 to 1987 and the salary explosion of 1991 skewed the data. As we discuss in further detail in section five, the slope coefficients from 1985 to 1987 are significantly different than

<sup>11</sup> In 1972, the ALCS and NLCS expanded from three game series to five game series. Up until 1969, the postseason consisted only of the World Series.

those from the early 1990s. However, the first two periods both exhibited the expected positive relationship between regular season winning percentage and team payroll.



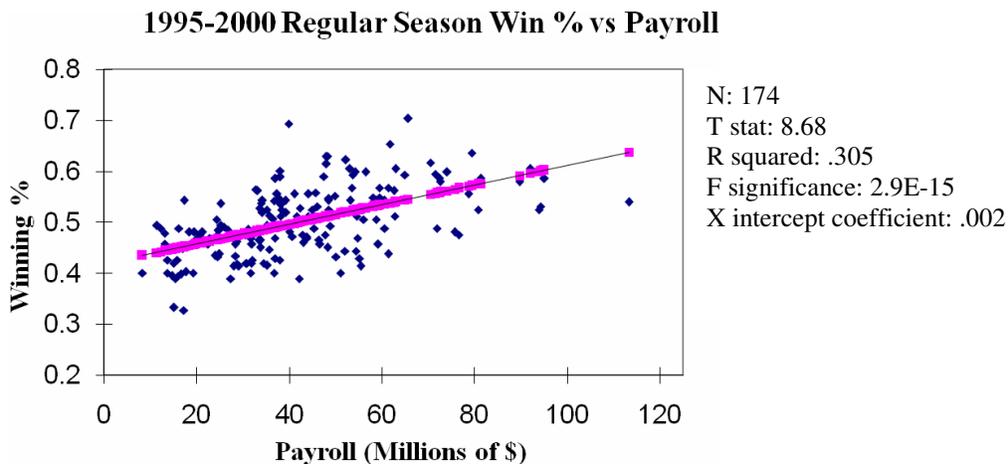
Neither the extension of the league championship series to seven games, collusion, nor the subsequent price explosion altered the relationship between playoff wins and team payroll. Our regression analysis from the postseason in this period revealed a statistically insignificant relationship between postseason wins and team payroll. As in period one, we cannot conclude that postseason wins and team payroll are related. This conforms to our hypothesis that a short postseason is random thereby diminishing the potential impact of team payroll.

### III. The Yankees' Dynasty

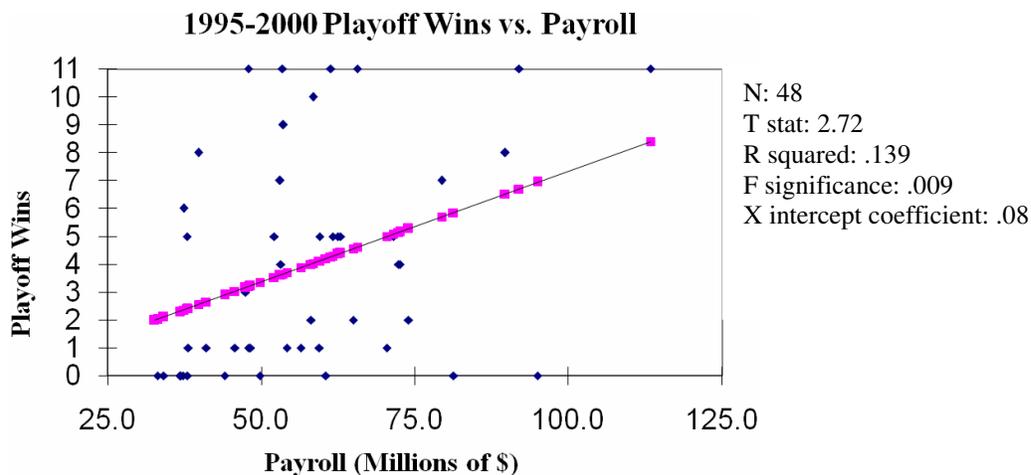
In April of 1995, the work stoppage came to a close. As part of the new Collective Bargaining Agreement the playoff format changed with the addition of a Wild Card team in each league and the five game division series.<sup>12</sup> The ensuing years saw the emergence of three franchises as baseball's elite clubs. The New York Yankees, already with by far the league's most impressive résumé, assembled a dynasty that would run through the 2000 season before gradually eroding. Led by Derek Jeter and Mariano Rivera, the team earned five World Series births in six years, winning four championships. The championship run was hardly a bargain for longtime owner George Steinbrenner, as the Yankees led the league in payroll every season, a streak that has continued through 2008. Two other teams—the Atlanta Braves and Cleveland Indians—enjoyed great success over this period as well. After winning the 1995 World Series, the Braves averaged 99 wins per year the next five seasons, making two additional World Series. Following the construction of brand new Jacobs Field in downtown Cleveland, the Indians responded with an average of 94 wins a season, earning five consecutive postseason births as well as two World Series appearances.<sup>13</sup>

<sup>12</sup> In addition to the change in playoff format, Major League Baseball restructured both the AL and the NL: new divisions were created in each league and the Brewers moved to the NL Central. Three years later, the Arizona Diamondbacks and Tampa Bay Devil Rays came into existence as the MLB became a thirty team league.

<sup>13</sup> The 1997 Indians are the only team to lose a World Series after carrying the lead into the bottom of the ninth inning in a Game 7. The loss was particularly excruciating for a fan base that had not seen its team win the World Series since 1948 and for a city that had not witnessed a professional sports championship since the 1964 Browns.



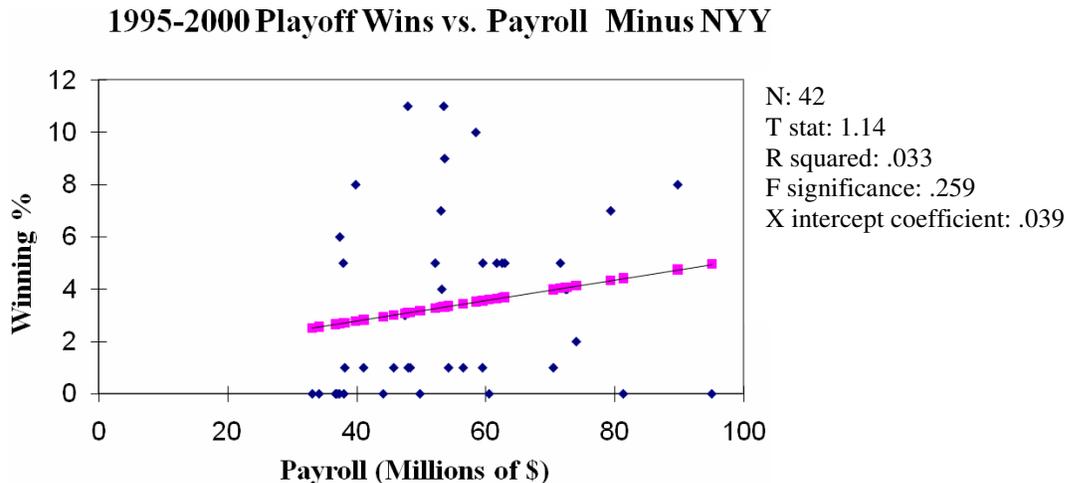
Given the dominance of the Yankees, Braves and Indians during the period from 1995 to 2000 our regression analysis relating regular season winning percentage to team payroll revealed the strongest relationship between the two variables. In order to maintain their success in this period, the Yankees, Braves and Indians consistently had among the top five highest team payrolls. As expected there was a statistically significant positive relationship between regular season winning percentage and team payroll. The slope coefficient was .0019% and the R squared value was .305 meaning team payroll explained 30.5% of the variation in regular season winning percentage. This period exhibited the strongest relationship between regular season winning percentage and team payroll of the four we analyzed.



The Yankees, Braves and Indians represented 75% of the World Series teams in this six year period.<sup>14</sup> Their postseason success and relatively high payrolls resulted in a statistically significant relationship between postseason wins and payroll. This was the only period for which a statistically significant relationship was evident through regression analysis. Thus, the addition of the five game division series may have decreased the random aspect of the postseason. The slope coefficient for playoff wins was .0796. Although this relationship appears to contradict our hypothesis that the playoffs are random and the length of the postseason mutes the potential

<sup>14</sup> 9 of 12 World Series teams during this time were one of these three teams.

effects of payroll, the data conforms to our original hypothesis if we control for the Yankees as an historical anomaly.



Removing the data on the Yankees, our regression analysis once again shows no statistically significant relationship between postseason wins and team payrolls, despite the addition of the division series. It can therefore be concluded that, disregarding the Yankees from 1995 to 2000, there is no relationship between postseason wins and team payroll. The Yankees during this period were one of the most dominant teams in the history of baseball. They acquired pitchers David Cone, David Wells, Roger Clemens and John Wetteland as well as kept internally developed talent, Mariano Rivera and Andy Pettite. They also acquired a slew of talented position players including Tino Martinez, Wade Boggs, Joe Girardi, Paul O'Neill, Cecil Fielder and Chuck Knoblauch while retaining homegrown stars like Derek Jeter and Jorge Posada. These players constituted the core of the Yankees' dynasty that won four World Series in five years. It appears that the Yankees of this period were not subject to the winners' curse and largely avoided the potential problems of information asymmetries when acquiring talent. We believe that the Yankees of this period are an exception to the general rule that the postseason is random with regards to team payroll and that this exception skewed our data.

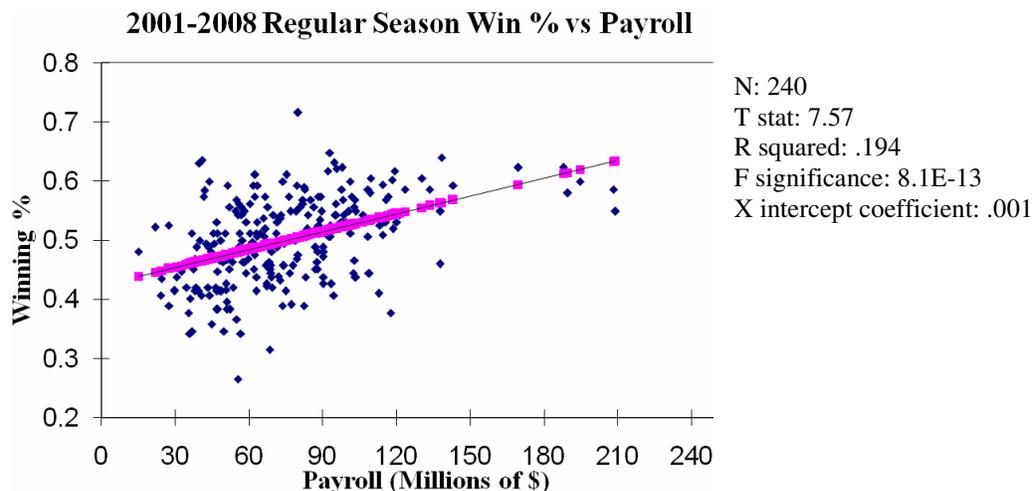
#### IV. Demise of the Yankee Dynasty

While the Yankees remained competitive after the turn of the century, appearing (but losing) in two World Series, several other teams also arose at this time. The purchase of the rival Boston Red Sox by sportsman owner John Henry has led both the Yankees and Red Sox to accelerate their payrolls to unprecedented levels. From 2001 to 2008, the Yankees' payroll grew from \$112.3 million to \$209.1 million, an 86% increase. The Red Sox have remained slightly more prudent, with a payroll peak of \$143 million in 2007. The Red Sox have parlayed their high-priced crop of players into 2 World Series championships, in 2004 and 2007. New York has not returned to the Fall Classic since losing to the Marlins in 2003. Other large market clubs that have likewise increased payroll have seen mixed results. The 2002 Angels and 2003 Marlins (outsport 3:1 by the Yankees) showed that high-priced talent is neither sufficient nor necessary for postseason success.

Both these teams demonstrated the effectiveness of the internalization strategy that baseball clubs have now embraced in order to build a winner. The approach is best illustrated by

the Cleveland Indians following their 1999 sale to Larry Dolan and the Oakland Athletics under General Manager Billy Beane.<sup>15</sup> The system emphasizes player development and scouting and resists high-priced free agents who may strangle the payroll of a small- or mid-market team. For the Indians, this resulted in the trade of All-Star pitcher Bartolo Colon to the Montreal Expos in 2002 for three minor leaguers.<sup>16</sup> The story of the Athletics is documented in Michael Lewis' *Moneyball*. In the book, Lewis explains how their management has employed a modernized and analytical approach to evaluating players' skills and development. Beane is well known for emphasizing statistics such as on base percentage and slugging percentage rather than more traditional categories such as batting average and steals. Averaging 95 wins from 2000 to 2006, the Athletics have set the standard for small market teams competing in an era when the average major league salary has surpassed \$3 million (Bloom 2008). This past season the World Series featured two teams that epitomize the internalization strategy: the Rays' and Phillies' playoff rosters included eight free agents in total, none of whom were core players (ESPN 2008). The Rays built their team through a series of excellent draft choices and astute trades, such as the 2004 exchange of Victor Zambrano for Scott Kazmir. The Phillies are similarly internally built with the likes of Cole Hamels, Ryan Howard and Chase Utley.

Another feature of this era was the agreement between players and owners of a new Collective Bargaining Agreement in 2002. While the revenue sharing formula stayed consistent with the previous CBA (revenue is redistributed from the top 13 revenue generating franchises to the bottom 17), the amount of local revenue shared increased from 20% to 34%.

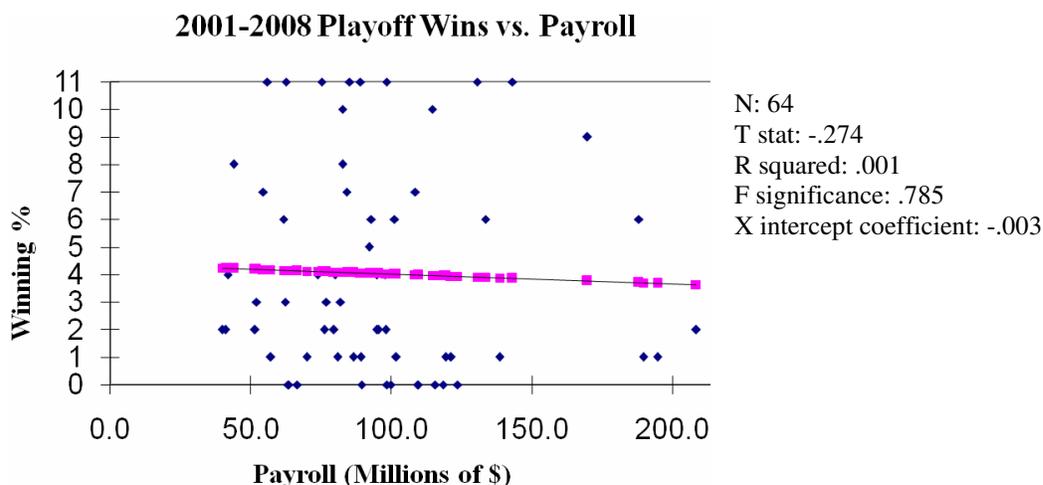


Despite the increased emphasis on internally developed talent and the propensity of mid- and small-market clubs to avoid the free agent market, our regression analysis from this period shows a strong relationship between regular season winning percentage and team payroll. The

<sup>15</sup> Although the Cleveland-Akron area is a mid-market, with an estimated 1.5 million TV households, previous Tribe owner Dick Jacobs managed the team as a sportsman owner. The new ownership has not demonstrated the same type of financial commitment.

<sup>16</sup> The Indians also received first baseman Lee Stevens in the trade, but he was considered a minor piece and played only 53 games as an Indian. The three primary players dealt to the Indians have since gone on to win a Gold Glove at second base (Brandon Phillips), a Cy Young (Cliff Lee), and the other has become a three-time All Star (Grady Sizemore).

slope coefficient for winning percentage was .001% and the R squared value was .19. This data suggests a diminishing importance of team payroll in determining regular season winning percentage when compared with period three, but is higher than the data for periods one and two. The increase in revenue sharing, which began in 2002, may contribute to the diminished relationship between regular season winning percentage and team payroll in this period. As we discuss in section five, the slope coefficients relating regular season winning percentage and team payroll decline significantly after the change in the revenue sharing format. However the regular season success of teams that have not fully embraced this internalization strategy, such as the Yankees, Red Sox, Cubs and recently the Angels, may explain the strong relationship between regular season winning percentage and team payroll.

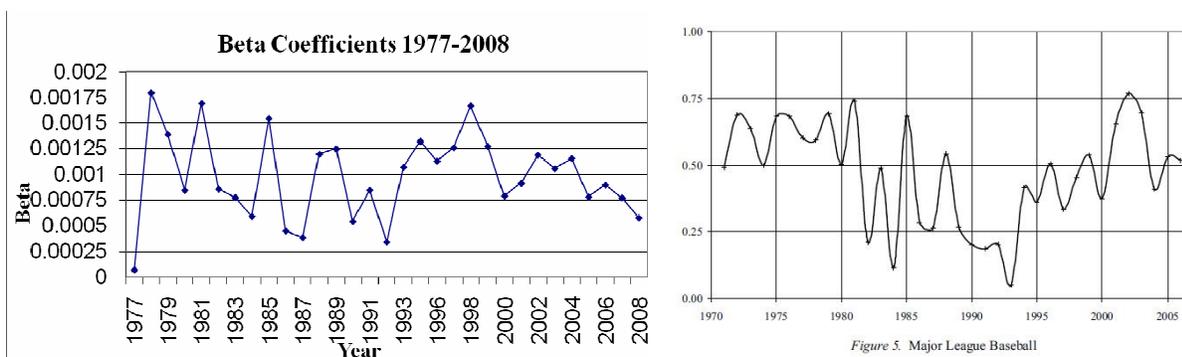


The relationship of postseason wins to team payroll continues to be statistically insignificant in this period. Although not significant, the slope coefficient for postseason wins in this period suggests an extremely weak negative relationship between postseason wins and team payroll. The 2007 Rockies and 2008 Rays are perfect examples of small market and small budget teams successfully outperforming larger market and larger budget teams in the postseason. The data from this period again conforms to our hypothesis that the postseason is a random event in which team payroll has a negligible effect on postseason wins.

#### V. Beta Comparison

In order to see the varying effect of payroll on regular season success over time we constructed a time series graph of slope coefficients from regression analyses relating regular season winning percentage to team payroll. To prevent bias we adjusted all team salaries to 2008 levels to compensate for the inflation of payrolls from 1977 to 2008.<sup>17</sup>

<sup>17</sup> Average team payroll increased from approximately \$1.89 million in 1977 to \$89.6 million in 2008, an increase of 4,640%.



Our data shows considerable variation in the relationship between regular season winning percentage and team payrolls throughout the period. The values range from .011 to .029%. Changing the slope coefficient from projected change in winning percentage to projected wins we see that throughout this period an additional ten million 2008 dollars corresponds to between one and three more wins. The changing trends in baseball are evident in the data. Through the late 1970s and early 1980s the data is highly variable. The collusion period is evident from 1985 to 1987 as the relative effect of payroll on regular season winning percentage dipped dramatically. This was followed by explosive growth in player salaries in 1991, represented in the graph by a stronger relationship between regular season winning percentage and payroll. The mid-1990s period of Yankee dominance in which the Yankees, Braves and Indians were 9 of 12 World Series teams shows some of the highest correlation between regular season winning percentage and team payroll. These teams were incredibly successful and consistently ranked among the top five in team payroll led by the Yankees' league-high payrolls since 1994. The new collective bargaining agreement in 2002 increased revenue sharing among the teams and thus led to a diminished relationship between regular season winning percentage and payroll.<sup>18</sup>

The data corresponds with John Vrooman's data on competitive balance throughout this time period. In *Theory of the Perfect Game: Competitive Balance in Monopoly Sports Leagues* (Vrooman 2008), John Vrooman created a time series graph illustrating the relationship between team's winning percentages one year to the next. He used these values to measure competitive balance from 1970 to 2008. A beta value of 0 represents competitive balance and a random league, while a beta value of 1 represents perfect competitive imbalance.

The shape of his graph corresponds closely with ours leading us to conclude that competitive balance or imbalance is at least in part related to the strength of the relationship between team payroll and winning percentage. In periods of competitive balance such as the early 1990s, team payroll had less of an effect on regular season winning percentages. In periods of relative competitive imbalance like the mid-1990s to late 1990s regular season winning percentage was more strongly related to payroll. We conclude from the correspondence in our data that periods in which teams spend to acquire free agent talent and receive that talent are periods in which the league is in a state of relative competitive imbalance. Conversely, periods in which teams spend to acquire talent but do not receive the talent for which they paid are competitively balance giving smaller market teams a greater chance to compete.<sup>19</sup>

## VI. A Theory of Postseason Success...Or Lack Thereof

<sup>18</sup> The collective bargaining agreement of 2002 changed revenue sharing from 80/20 to 66/34.

<sup>19</sup> We attribute this to information and talent asymmetries as well as the winners' curse.

In addition to testing the impact of payroll on postseason success, we examined various theories that could potentially account for winning in October. The first relationship we tested was that between regular season winning percentage and postseason wins. For each of the four periods outlined in our paper we found a statistically insignificant relationship between postseason wins and regular season winning percentage regardless of the length of the playoffs or the historical context. These findings demonstrate that regular success cannot predict postseason performance. Such is the case both anecdotally and empirically. As Los Angeles Angels of Anaheim manager Mike Scioscia quipped, “You can take the regular season, all the statistics, crumple all that up and throw it in the waste basket.” The 2008 Angels won a league-leading 100 games yet were eliminated in the first round in four games. The Philadelphia Phillies struggled to win their division with only 92 victories, yet won the World Series in five games.

We also tested various team statistics and team compositions to explore any possible explanations for postseason success since 1995. We performed regression analyses in order to investigate a number of possible relationships and in every single case we failed to find a statistically significant relationship. To assess whether the origin of a roster’s talent impacted postseason success, we looked at postseason wins and the amount of internally developed versus free agent talent. To see if momentum leading up to the playoffs led to postseason wins we related postseason wins to winning percentage in the final month of the regular season. We also examined the adage that pitching wins championships. To this effect, we performed several regression analyses to test the impact of a strong pitching staff on playoff success, looking at: the presence of two dominant starters, a team’s top four starters’ regular season wins as well as regular season ERA. On the other hand, we also looked at power by examining regular season slugging percentage and postseason wins. Finally, we tested the theory that pitching was more important to NL teams and power more important to AL teams because of the designated hitter. In every case, we found no statistically significant relationship.

It appears that there is no secret to winning in the postseason. We are left to believe that success in October is due to intangibles, experience and other unquantifiable phenomena. Perhaps true championship players elevate their performance above their regular season level while others wilt under pressure. Further research on this topic could examine the importance of the “clutch” player in the postseason.<sup>20</sup> Overall, we are confounded as to what explains postseason success and therefore conclude that the playoffs are a random event.

## Conclusion

Our results are consistent with what we expected given what we know about this era of baseball. The regression analyses of the four periods confirm our hypothesis that team payroll has significantly impacted regular season success in the free agent era. The ability to purchase talent on an open market and a six month, 162 game season diminish the random elements of professional competition, leading to the expected effects of team payroll on regular season winning percentage. Each period demonstrated statistically significant relationships between regular season winning percentage and team payroll, none more so than the period of Yankee

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<sup>20</sup> Sports economist George Ignatin has said that “clutch and choke performance in baseball are illusions,” but we believe this field is worth examining. Potential variables to analyze in such a study include batting average with runners in scoring position and batting average with runners in scoring position and two outs. One could also narrow down statistics by looking only at situations occurring in late innings of a close game.

dominance from 1995 to 2001. Unlike any other period we analyzed, this was a period of baseball dynasties: the Yankees, Braves and Indians.

Due to revenue and salary structure the existence of dynasties in baseball is rare relative to other professional American sports leagues. The data substantiates our belief that team payroll has a positive effect on a team's regular season winning percentage. Furthermore, from our analysis of slope coefficients from 1977 to 2008 we conclude that a stronger relationship between regular season winning percentage and team payroll corresponds to decreased competitive balance.

While conventional wisdom holds that teams have the ability to "buy" championships in baseball because there is no salary cap, our evidence does not support this claim. In the postseason we found no statistically significant relationship between wins and team payroll. Although the period from 1995 to 2000 demonstrated such correlation, the relationship disappeared when the Yankees were viewed as an historical anomaly and removed from the analysis. These Yankee teams were able to spend their way to four championships in five years and become the only real championship dynasty in the free agent era. The statistically insignificant relationship between postseason wins and team payroll conforms to our hypothesis that the playoffs are a random event.

Other unsuccessful attempts to find explanations for postseason success corroborate this contention. Neither regular season winning percentage, the level of internalization, performance over the final month of the season nor a team's pitching or power statistics seem to be related to a team's postseason success. Besides the Yankee exception, a postseason in which a team has to win 7, 8 or 11 games is too short for any explanatory variable to take effect. Because of the nature of a postseason series, one off night or even a lucky bounce can lead to the elimination of a ballclub. Therefore we conclude that the playoffs are a random event in the free agent period.

Compared to other American professional sports leagues, Major League Baseball maintains a healthy degree of competitive balance. The level of imbalance during the regular season ensures that the playoffs include at least a few of the same perennial contenders. The presence of these clubs keeps casual fans interested in the game. However, since the turn of the 21st century, eight different ball clubs have won a World Series championship. This diversity of winners stands in stark contrast to a league such as the NBA, in which only eight franchises have won going back to 1980. The NFL suffers from such excessive randomness that Super Bowl teams can end up in the cellar the following season. We believe that ultimately the fortune of any professional sports league depends on a playoff system that stimulates maximum interest from the league's fan base. The familiar faces combined with the unpredictable nature of the outcome make for exciting October baseball. Thus, the current payroll and salary structure in Major League Baseball contribute to the continued success of the game.

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