



Outside the Lines

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Major League Baseball's Draft Efficiency By Jonathan Sisk

Professional sports utilize player drafts to spread talent throughout the league. Drafts are designed to assure talent isn't hoarded by a few teams. Every major league sport in America, as well as the majority of the world's top baseball leagues, institutes an amateur player draft of some sort. Major League Baseball (MLB), Nippon Professional Baseball of Japan, the Korea Baseball Organization and the Chinese Professional Baseball League of Taiwan all use an amateur player draft to disperse talent among teams. The notable exception to this within baseball is the Cuban National Series, in which players play for the sponsored teams within the province in which they reside.

The four major league sports in the United States all incorporate amateur player drafts that are the basis for acquiring amateur talent. Major League Soccer (MLS) has six rounds split into two separate drafts, the National Hockey League (NHL) has seven rounds, the National Football League (NFL) has seven rounds and the National Basketball Association (NBA) has two rounds. By comparison Major League Baseball has an extraordinarily expansive draft with 50 rounds.



Bryce Harper: big bat, big bonus

Much of the success of a major sports team relies on being efficient with this talent acquisition process. That is no more evident than when teams are signing these drafted players to multi-million dollar contracts before they play their first professional game. The signing bonus given to the top pick each year has gone from \$235,000 in 1988 to \$1.55 million in 1991 (Jazayerli, 2005d) to the recent \$6.25 million signing bonus given to Bryce Harper (Kilgore, 2010).

MLB's amateur player draft is the measuring stick for teams' scouting and player development departments, and being efficient in this process can set a team up for decades, whereas sinking a large percentage of the budget into the draft and bearing no fruits can leave the organization bare, leading to the double jeopardy of spending money on employees that produce very little and then being forced to pay other employees to replace them. Organizations cannot survive while hemorrhaging money in this way, therefore draft efficiency is of the utmost importance.

The purpose of this research is to determine if the MLB amateur draft is efficient compared to the NBA, NHL, and NFL drafts. I look at the decade of the 1980s for my analysis because it is the most recent decade that includes drafted players that have concluded their playing careers.

Literature Review

There are many articles and books that analyze the MLB draft, but none have quantitatively compared MLB's system to those of the other major leagues. [editor's note: see page 8 of this newsletter for a recently published article on this topic] *Baseball America* published one such article on their website (Callis, 2006). They label 67.1% of players drafted between 1990 and 1997 as "flops," players who did not play at the top level. Only 0.9% became "stars;" 8% were "regulars," "good," or "stars," the top half of their defined categories.

Spurr analyzed the percentage of players who made it to the top level by the level of amateur baseball played. Fewer than fifty percent of number one overall draft choices make it to the top level, and that percentage drops off drastically later in the draft (Spurr, 2000).

Burger analyzed the MLB draft with respect to valuation and returns on investments. Although "blue chip" prospects in the draft yield a 44% return, Burger admits that "three quarters" of these blue chip prospects are "failures" (Burger, 2009). From 1990-1999 number one overall picks averaged two wins above replacement (WAR) (Manning, 2009). WAR is a statistic used to compare players to the generalized replacement player. While complicated to compute, it attempts to define the difference between a player and the worst possible scenario at that position. According to Baseball-reference.com, most starting major league players accumulate three to five WAR per season and All-Star caliber players accumulate seven, therefore two WAR for a number one draft choice is far from a plausible way to build a team through the draft.

In 2005 Rany Jazayerli wrote a series of articles for *Baseball Prospectus* detailing the efficiency of the draft and some of the nuances of the drafting trends and structures. He found that between 1984 and 1991 50.8% of top 100 draft picks made it to the



Mike Leake, the last college player to make his major league debut without first playing in the minor leagues.

major leagues and between 1992 and 1999 47.7% of top 100 picks made it to the major leagues. The study goes on to show that the biggest difference between any two picks is between the first and second pick of the draft, a drop-off of 10 WAR, and that there is very little difference in WAR between the second and third round (Jazayerli, 2005a). Jazayerli also found that college players chosen in

the top 100 picks are more likely to reach the major leagues than high school players. College players reach the major leagues 59 percent of the time compared to high school players who reach the major leagues 41 percent of the time.

College players also have more value, as measured by WAR, than high school players at every draft position except the first overall selection (Jazayerli, 2005b). Jazayerli argues that college players also become star caliber players more often than high school players and have the added value that they produce the bulk of their return on investment much earlier than high school draftees do. He also argues that high school draftees have closed the gap in the later years of the study. He believes this may be due to better evaluation of high school talent, most likely due to the rise of travel baseball over school baseball. This allows more players to be seen in a shorter period of time, and they face better talent (Jazayerli, 2005c).

Garrioch (2010) found that as many as 70% of all players are failures. Pedicini (2010) and Wang (2009) found that there was a large drop off in expected production at the major league level after the first 30 selections, which coincides with previously mentioned studies that showed that the first pick of the draft produced the most WAR and there was a steady drop in the following picks. Andrecheck (2009) reiterated this point utilizing a chart that showed the sharp decline in WAR in the early rounds and noted a plateau that exists between picks 100 and 500. This plateau is far below the level that warrants the time and effort put into those rounds as the expected value between 100 and 500 is one to two WAR. Only around eight percent of players drafted in the first ten rounds become major league regulars and 25% of first round draft picks make an impact at the major league level above that of a “trivial” appearance (Burger, Grayson & Walters 2006).

The common thread in all of the research is the high failure rate of drafted prospects. Some of the research splits players into sub-sets, but even when divided between college and high school draftees, or hitting and pitching prospects, there is no truly successful sub-set.

Data Analysis and Interpretation

The data collected from Hockey Reference, Pro Football Reference and Basketball Reference are used as benchmarks for comparison with MLB draft data. Data were gathered from these databases for the years 1980 to 1990.

The NBA held a draft every year between 1980 and 1990. The structure changed three times during this decade, eventually resulting in the current two round draft. From 1980 to 1990 1,784 players were drafted and 642 (36%) made it to the NBA. This number is misleading, however, due to the changes that occurred throughout the decade. From 1980 to 1984 there were 10 rounds and 26.3% of drafted players made NBA rosters. This improved to 39.2% between 1985 and 1987 when there were seven rounds. In 1988 there were three rounds and the “success rate” jumped to 77.3%. When the current two round draft was implemented in 1989 efficiency was nearly perfect. In the 1989 and 1990 drafts 92.6% of drafted players earned roster spots. During the decade the mean number of players that eventually made it to the NBA was 58.4. Despite going from more than 200 selections to 54 the yield remained relatively high, dropping from 58.8 to 52.6. The current structure is a very efficient system that both maximizes the effectiveness of the system and maintains efficiency by minimizing unproductive units.

The NFL held a 12 round draft every year between 1980 and 1990. In 1984 the league added two supplemental rounds. That year 420 players were drafted and 295 of them played in the NFL for a 70.2% efficiency score. Every other year saw between 333 and 340 players drafted with 209 to 287 of them earning a spot on an NFL roster. Overall 70.9% of players drafted between 1980 and 1990 made it to the NFL.

The NHL held a draft every year between 1980 and 1990. Their draft structure changed numerous times throughout this period and, unlike the aforementioned leagues, the changes that occurred with the NHL’s draft structure increased drafted players and decreased efficiency. In 1980 the NHL utilized a ten round draft which became an 11 round draft in 1981 and a 12 round draft in 1982. It remained a 12 round draft throughout the period analyzed here, but was decreased to the current seven rounds in 2005. 43.8% of players drafted

between 1980 and 1990 played in the NHL. From 1982 to 1990 only 41.1% of drafted players played at the highest level, down from 53.6% in 1981 and 62.9% in 1980 when the draft was shorter. 41.1% is not a great efficiency rating, but as noted earlier, the NHL has taken actions to alleviate this problem over the last two decades by decreasing the number of players drafted.

MLB draft numbers will be compared to the most recent draft format in each of the other leagues. For the NBA it is the 52.6% efficiency rating they received after dropping to three rounds in 1988. The value for the NFL is 70.9%, which covers the entire decade. The value used for the NHL is 41.1%, which is the efficiency rating they attained after increasing to 12 rounds in 1982. The mean efficiency rating for these three leagues is 54.8%, ranging from 41.1% to 70.9%.

The MLB draft structure was much more complicated than the other leagues before 1987 due to the fact that they held four drafts, two each in January and June, and players were often drafted multiple times in the same draft season. This was very inefficient and in 1987 the system was reduced to one June draft of approximately 50 rounds. There was technically no round limit, and frequently one or two teams were still drafting into the 60th and 70th rounds. This structure is still in place, but now with a hard 50 round limit. Although there were major changes made to the structure of the draft after 1986, the efficiency rating did not change very much due to the expansiveness of the draft when compared to the other leagues. But considering the large numbers of players selected in the MLB draft, even a small improvement makes a noticeable difference. From 1987 to 1990, 10.6% of drafted players reached the major leagues. From 1980 to 1986, with the four draft structure 9.5% made it. Eliminating the duplicate draft selections improved the efficiency score by 11.6%. The largest boost to efficiency came in 1987, the year after the changes were made, when efficiency hit a decade high 13.1%.

Even at its highest point, MLB's draft structure is only 24% as efficient as the mean of the other leagues. The mean of the most updated draft structure for MLB's efficiency rating, 10.6%, is only 19.3% as efficient as the mean of the other

leagues and 25.8 percent as efficient as the NHL, the lowest of the other leagues.

In defense of MLB, they did improve their efficiency score by eliminating the four draft structure and implementing the single June draft. But, considering the gap in efficiency between MLB and the other leagues, much more needs to be done. The NFL drafts fewer than 350 players per year, has many more positions and roster spots, and players have shorter careers than does MLB. The NBA drafts less than 100 players per year with their updated structure, however they have half as many roster spots and less specialized positions to fill than MLB. The NHL might be the most comparable structure to MLB as it has a minor league system and similarly specialized roster structure. Like MLB, the NHL draws a large percentage of its players from outside of the United States. The current 1,500 player MLB draft is more than four times larger than any other league, yet the total number of roster spots at the major league level is similar to the NHL, half that of the NFL, and about twice the size of the NBA.

Action Plan

After carefully researching and analyzing the business models available and history of the structures involved, it is apparent that MLB and its teams need to improve the efficiency of their draft structure. There are three major ways to improve efficiency while also maintaining effectiveness. The first is to minimize the amount of picks selected so that teams can spend more of their time evaluating the top players and less time and energy on players that have no legitimate chance of matriculating to the highest level of their respective organizations. Considering the number of top level players drafted by MLB clubs and the available structures from other leagues, 500 drafted players per season would improve efficiency greatly as fewer than 200 drafted players each year actually make it to MLB. Drafting twice as many players as are expected to make any impact at the highest level is sufficient. A fringe benefit of this structure is the added development time it gives the players who are drafted. With much less turnover it allows teams to train their own players rather than replacing them year to year. It is a commonly accepted business philosophy that it is much more efficient to train current employees than to recruit and train new employees.

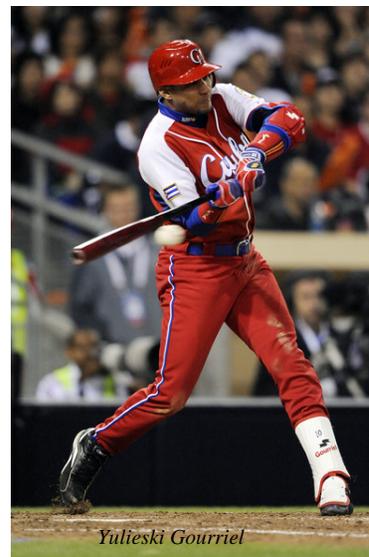
The second way to improve efficiency is to extend the time clubs are granted control over drafted players. Teams currently control a player's draft rights only for about ten weeks, from the June draft until August 15th or the date they return to school full time. Players can be drafted as high school seniors, junior college freshmen, junior college sophomores, four year college juniors and four year college seniors. While most players are not drafted this many times, several are drafted twice, which is inefficient. Extending draft rights to four years would allow teams to control players through their college careers rather than having them drafted by other teams later in their careers. This would eliminate duplicate draft picks, promote early signing, which would lead to more development time, and allow teams to evaluate new players rather than having the same players on the market for five years.

The third way to improve efficiency is to include all players in the draft structure and eliminate the separate systems used for recruiting and procuring talent outside of the United States, Canada and Puerto Rico. At present, only those geographic regions are covered by the draft. All players outside of these regions are free agents and are bid on by any team that wants their services. More than 40% of MLB and minor league players are born outside of the United States (Shepherd & Shepherd, 2002). The majority of these players are from Latin America and a growing number are from Asia. Considering that almost half of an organization's players are foreign born, it would vastly improve the efficiency of the draft to include them.

Matthew Piehl (Piehl, 2010) argues against the international draft by raising legal concerns such as the U.S. embargo on Cuba and current contracts with other foreign leagues. This should not hinder MLB's ability to institute an international draft. A draft is not a contractual obligation to the drafted player and does not, in and of itself, promise any financial reward to the player, their current team, league or country.

A draft system is an agreement between member institutions to respect the draft rights of the other teams within the membership and not negotiate with or recruit a player whose draft rights are controlled

by another team. The MLB draft is an agreement between a group of American and one Canadian organization, not an agreement between an organization and a player. So, for example, a team that drafted Yulieski Gourriel off the Cuban National Baseball Team would not violate the U.S. embargo on Cuba, it would simply give the drafting club the rights to negotiate with Gourriel if he ever became available and desired to play with an MLB club. The working relationships with Japan and Korea would have to be adjusted accordingly, but this should not be much of a hurdle, as most players in the Nippon Professional Baseball (NPB) and Korean Baseball leagues desire to play overseas, and MLB clubs already recruit and procure amateur players from both nations. Owning the rights to negotiate with a player currently playing for an NPB team would only help NPB by limiting the player's options outside of Japan to one MLB club rather than all of them, therefore it seems unlikely that these leagues would have any qualms with an international draft.



Limitations and Future Research

The major variable in MLB's draft success rate is the strong influence of player development on the success of draft picks. These two systems are directly and strongly related and the failure of one will project onto the other. The action

plan promoted would have a large influence on player development as well as the draft. With fewer players drafted, the player development systems would be reduced and the minor league structure would need to be altered to accommodate the changing flow of players. The likely effect of drafting fewer players would be the elimination of one or more developmental teams in each club's system.

This research covers a very short period of time and focuses on only one measure of efficiency. Future research is needed to attain a fuller understanding of the efficiency differences between leagues and

across time. There are three ways to measure efficiency of draft structures and I have considered only the most basic one here.

The second measure of efficiency is production at the top level compared to draft pick totals. This measure would weight players by their level and/or length of production. The third measure would be a return on investment analysis. This would measure the efficiency of monetary expenditure in the draft structure.

Final Thoughts

These three changes would create a much more efficient draft structure. They would allow scouts and evaluators to concentrate their efforts instead of having to re-evaluate the same prospects year after year and negotiate with all the international prospects rather than the few for whom the club owns draft rights. They would also allow a club to own the rights to a player for extended periods of time rather than giving players the leverage to re-enter the draft several times, which creates duplicate draft picks and limits a prospect's exposure to professional development, especially for players who do not attend major college baseball programs. Finally, these changes would allow teams to develop players more fully rather than turning them over year after year. It is much more efficient to train current employees than to recruit and train new ones, therefore this aspect alone will create a better system for the organizations. The players would benefit from this change because they would be allowed to develop more fully and more of them would eventually matriculate to higher levels of professional baseball, which would mean higher pay and a greater likelihood of making it to the top level.

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Recently Published Research

This column highlights recently published articles on topics that may interest members of the Business of Baseball Committee. If you are aware of a source that publishes articles of interest to the readership, please alert me so that I can monitor it.

Pedace, Roberto, and Smith, Janet Kiholm, "Loss Aversion and Managerial Decisions: Evidence from Major League Baseball," *Economic Inquiry* 51, no. 2 (April 2013), pp 1475-1488

Previous research indicates that management changes are important events for organizations, partly because they lead to reversals of poor prior decisions. An unanswered question is why replacing the manager seems to be necessary for reversing poor decisions. One explanation is that managers have an irrational behavioral aversion to admitting mistakes (loss aversion). We test this hypothesis with a research design that mitigates many of the measurement problems associated with investment decisions in traditional corporate settings, and that allows us to distinguish agency cost from loss aversion as explanations. Using Major League Baseball data, we find that new managers, compared to continuing managers, are more likely

responsible for acquiring a player who is underperforming, the likelihood of player divestiture is significantly higher relative to low performers acquired by earlier managers. Experience of the acquiring manager does not affect the likelihood that the manager retains a low performer, suggesting that it is loss aversion, and not career concerns, that motivates acquiring managers to retain low performers. The findings suggest that loss aversion plays a significant role in managerial decisions and managerial turnover.

Wenz, Michael G., "A Proposal for Incentive-Compatible Revenue Sharing in Major League Baseball," *Journal of Sport Management* 26, no. 6, (November 2012), pp 479-489

This paper proposes a payroll tax and revenue sharing model for Major League Baseball that better aligns the incentives of individual team owners with league-wide goals of competitive balance and cartel profit maximization. The author demonstrates why the current system is poorly suited for improving competitive balance, then argue for a system of transfer payments based on a more aggressive payroll tax combined with a subsidy distributed based on on-field performance rather than market size or financial performance. High-payroll teams would contribute disproportionately to the revenue-

sharing pool, while successful teams would receive disproportionately large subsidies. By increasing the marginal value of a win through the performance-based subsidies, small-market teams will see increased incentives to invest in playing talent. The author presents some limited financial data and suggest how to calibrate the model to yield the optimal level of competitive balance and optimal revenue split between players and owners.

Mann, Samuel G., "In Name Only: How Major League Baseball's Reliance on its Antitrust Exemption is Hurting the Game," *William & Mary Law Review* 54, no. 2, (November 2012), pp 587-626

The article discusses a U.S. antitrust law exemption for the Major League Baseball (MLB) professional sports organization as of November 2012, focusing on an analysis of the reportedly detrimental impact of the exemption on the game of professional baseball in America. Several baseball-related legal cases are addressed, including the U.S. Supreme Court cases *Toolson v. New York Yankees Inc.* and *Flood v. Kuhn*. A lack of antitrust protection for the National Football League is also mentioned.

Chih-Fu Cheng, Lung Hung Chen, and Mei-Yen Chen, "Fan participation behaviour in baseball: an application of the theory of planned behaviour," *International Journal of Sports Marketing & Sponsorship* 14, no. 1, (October 2012), pp 22-33

Watching sporting events is a popular leisure activity. However, in the context of sports marketing, little is known about the mechanism that determines fans' game-attending behaviour. This study aims to investigate fan participation in the context of baseball, using the theory of planned behaviour. The 623 subjects of this study were recruited from the Chinese Professional Baseball League in Taiwan. The structural equation indicates that attitude and perceived behavioural control will have an influence on game attending behaviour through behavioural intention. However, subjective norms do not significantly predict behavioural intention, nor do perceived behavioural controls significantly predict game-attending behaviour. The results are discussed in terms of their applicability to fan behaviour.

Romanowich, Paul, "Home Advantage in Retractable-Roof Baseball Stadia," *Perceptual & Motor Skills* 115, no. 2, (October 2012), pp 559-566

This study examined whether the home advantage varies for open-air, domed, or retractable-roof baseball stadia, and whether having the roof open or closed affects the home advantage in retractable-roof baseball stadia. Data from Major League Baseball (MLB) games played between 2001 and 2009 were analyzed for whether or not the presence of a home-advantage was dependent on the type of home stadium used. Home advantage was robust for all three types of stadia. A significant effect of stadium type on home advantage was found, with a greater home advantage for teams playing home games in domed stadia relative to open-air stadia, replicating a previous study. There was a greater home advantage for teams playing home games in domed stadia relative to retractable-roof stadia. No other differences in the home advantage were found; results are discussed in terms of familiarity with the facility.

Broshuis, Garrett R., "Deterring Opportunism Through Clawbacks: Lessons for Executive Compensation from Minor League Baseball," *St. Louis University Law Journal*, 57, no. 1, (Fall 2012), pp 185-217

The article discusses the use of clawback provisions in minor league baseball contracts which acts as a deterrent to opportunistic behavior. It informs that the use of prospective clawbacks in minor league contract demonstrates the utility of clawbacks as a tool in protecting risky investments. It concludes that the use of clawback provisions in minor league baseball contracts demonstrates their ability to deter opportunism.

Koz, D.; Fraser-Thomas, J.; Baker, J., "Accuracy of professional sports drafts in predicting career potential," *Scandinavian Journal of Medicine & Science in Sports* 22, no. 4, (August 2012), pp 64-69

The forecasting of talented players is a crucial aspect of building a successful sports franchise and professional sports invest significant resources in making player choices in sport drafts. The current study examined the relationship between career

performance (i.e. games played) and draft round for the National Football League, National Hockey League, National Basketball League, and Major League Baseball for players drafted from 1980 to 1989 (n = 4874) against the assumption of a linear relationship between performance and draft round (i.e. that players with the most potential will be selected before players of lower potential). A two-step analysis revealed significant differences in games played across draft rounds (step 1) and a significant negative relationship between draft round and games played (step 2); however, the amount of variance accounted for was relatively low (less than 17%). Results highlight the challenges of accurately evaluating amateur talent.

Fairley, Sheranne, and Tyler, B. David, "Bringing Baseball to the Big Screen: Building Sense of Community Outside of the Ballpark," *Journal of Sport Management* 26, no. 3, (May 2012), pp 258-270

Sport fandom, particularly game attendance, offers an opportunity for social interaction. However, actual attendance at sport events is unrealistic for many individuals. In an attempt to foster a sense of community among such fans, sport marketers have begun to create additional consumption sites by televising live games in central locations, such as in a movie theater. This study examines the motives and experiences of fans who attend a cinema to view live baseball games. Data were collected through participant observation, a survey distributed to event attendees (n = 188), and focus groups. Results suggest that the sense of community and social environment created at the cinema were key factors in the viewing experience. The cinema provided individuals a collective viewing experience with likeminded fans, which helped create a stadium-like environment. This atmosphere, which affords the opportunity to focus on the game (compared with viewing at home or in pubs), allows fans to feel more connected to the team as they believe the cinema offers an authentic environment. Thus, providing sites for fans to view the game with likeminded fans outside of the stadium can be used as a means of creating social ties that could lead to increased fan loyalty. For some individuals, the cinema experience was preferred over that of the ballpark.

Hunt, Justin R., "To Share or Not To Share: Revenue Sharing Structures in Professional Sports," *Texas Review of Entertainment & Sports Law* 13, no. 2, (Spring 2012), pp 139-178

The article examines revenue sharing structures in professional sports in the U.S. It aims to create a clear, systemic approach to the computation of the amount of revenue shared in football, baseball, and hockey leagues. Limited public financial figures and the absence of universal reporting measures across the leagues reportedly made the determination of shares difficult. The extent to which media sources overstate the amount of revenue shared in a season was also discussed.

Allen, I. Elaine, and Seaman, Julia E., "Fair or Foul?" *Quality Progress* 45, no. 4, (April 2012), pp 36-43

The article discusses the use of analytics, or sabermetrics, by the Major League Baseball (MLB) team the Oakland A's, as popularized the book and film "Moneyball." Particular focus is given to the Oakland A's analysis of the team's on-base percentage (OBP) rather than individual players' performances. The author analyzed variables including payroll and performance information for all major teams. Data analysis also included univariate, bivariate, and multivariate methods.

Chen-Yueh Chen, Yi-Hsiu Lin, and Yen-Kuang Lin, "A demand analysis for the Chinese Professional Baseball League 1990-2008," *International Journal of Sports Marketing & Sponsorship* 13, no. 2, (January 2012), pp 106-115

The Chinese Professional Baseball League (CPBL) experienced a rapid decline in attendance after the mid-1990s. In this study, market demand analysis is used to discover the causes of variation in CPBL attendance from 1990 to 2008. The ordinary least squares (OLS) is employed for model estimation. From this model, empirical evidence reveals that a homogenous sport substitute, Taiwan Major League (TML), the Major League Baseball (MLB) effect and game-fixing scandals in CPBL negatively influence CPBL attendance. Additionally, real income is found to negatively affect CPBL attendance, making CPBL games an inferior product. The proposed model accounts for

approximately 91% of variation in CPBL attendance between 1990 and 2008.

Paul, Rodney J., and Weinbach, Andrew P., "Baseball: A Poor Substitute for Football—More Evidence of Sports Gambling as Consumption," *Journal of Sports Economics* 14, no. 2, (April 2013), pp 115-32

Due to the use of sports wagering market data as a laboratory to test the Efficient Markets Hypothesis, sports bettors have been assumed to behave as investors. With the rejection of the balanced book hypothesis and the persistent support of market efficiency, the notion of the sports bettor as investor should be in doubt. Using betting volume data from online sports books, bettors are shown to substitute out of baseball betting into football betting when the season starts. The authors argue that these findings are consistent with consumer behavior, but inconsistent with the notion of bettors as investors.

Deli, Daniel, "Assessing the Relative Importance of Inputs to a Production Function Getting on Base Versus Hitting for Power," *Journal of Sports Economics* 14, no. 2, (April 2013), pp 203-17

Since the publication of Michael Lewis's book, *Moneyball*, there has been a commonly held belief that getting on-base percentage (OBP) is more important in run production than hitting for power slugging percentage (SLG). Implicit in that conclusion is an assumption that OBP and SLG are drawn from similar distributions. The author finds, however, that they are drawn from meaningfully different distributions. Controlling for those differences, the author finds no evidence that OBP is more important in run production than SLG. In fact, the author finds that from 1980 to 2007 SLG was more important in run production than OBP.

Bradbury, John Charles, "What Is Right With Scully Estimates of a Player's Marginal Revenue Product," *Journal of Sports Economics* 14, no. 1, (Feb 2013), pp 87-96

Krautmann, Anthony C., "What Is Right With Scully Estimates of a Player's Marginal Revenue Product," *Journal of Sports Economics* 14, no. 1, (Feb 2013), pp 97-105

The two authors, in separate articles, comment on an article published previously in the *Journal of Sports Economics*. Krautmann responds to the previously published Bradbury article, which suggests that the free-market approach to estimating a player's marginal revenue product (MRP) is limited. He begins by reviewing a number of empirical issues that potentially limit the Scully approach, then turns to Bradbury's concerns about the free-market approach. Krautmann closes by noting that these two methods are not competing nor is one necessarily superior to the other—each method has its own merits in terms of answering different types of questions related to a player's value. Bradbury argues that while the Scully method has its weaknesses; however, its flaws are not as serious as Krautmann claims. Though Krautmann's free market returns method offers a useful approach for estimating players' marginal revenue products, it suffers from deficiencies that the Scully method avoids; thus, it is not necessarily superior to revenue-based estimates.

Contributors

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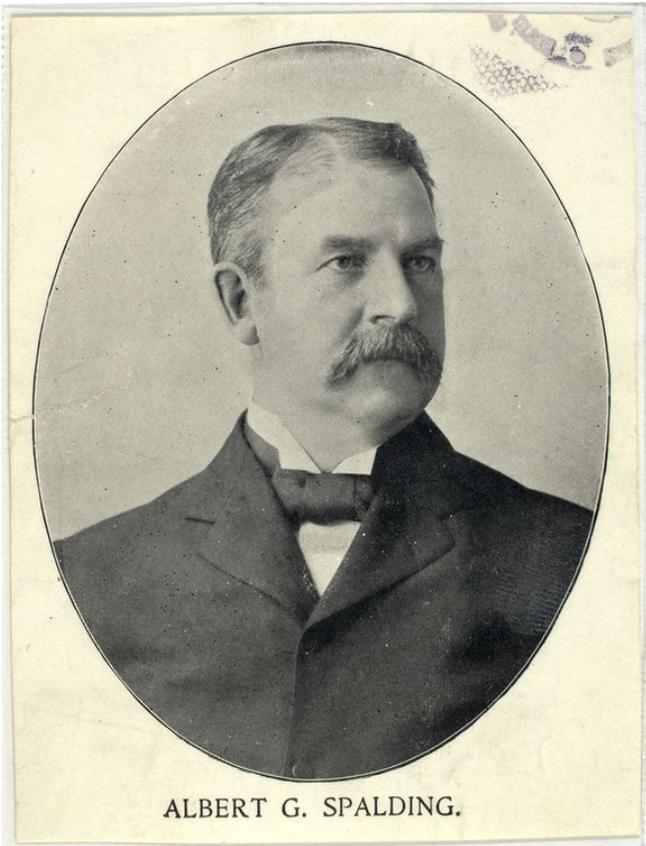
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An Update on the Annual Salary Leaders in the 19th Century

By Michael Hauptert

In the last issue of this newsletter I published a listing of annual salary leaders from 1874 to 2012. I am happy to report that the list is already obsolete. Since its publication several new salaries for 19th century MLB players have been discovered in the financial records of the Chicago White Stockings, held at the Chicago Historical Society. The discovery of these financial records has led to a revision of the first seven years of the table, which are reproduced below.



Five of the salary leaders are new, the other two fill years for which no previous salaries were known (1878 and 1879). The biggest change was in the 1876 salary leader. The previous highest known salary belonged to John Clap (St. Louis NL) at \$480. Spalding easily eclipses that mark, having earned \$4000 that year, his first with Chicago after leaving Boston. Spalding also holds the mark for highest salary in 1877, though at a pedestrian \$2900. This salary replaces the previously known top salary of \$750, earned by Levi Meyerle.

Besides his base salary of \$4000, Spalding negotiated two separate profit sharing clauses in his contract that netted him an additional \$2903 in 1876. The \$6903 he earned that year from the White Stockings was the highest known compensation package paid to any player in the 19th century. In fact, it wasn't until 1906 when Napoleon Lajoie earned \$8500 from Cleveland that Spalding's compensation mark was eclipsed.

The salaries of Bob Ferguson (\$3700) and Frank Flint (\$1800) fill voids in the annual salary leader data for the years of 1878 and 1879, lowering the number of "dataless" years from 12 to 10. There is still no known primary source salary data for 1893-94, 1896-98, 1900-03, and 1905.

The White Stockings data adds 102 new observations to my total salary database, increasing the coverage for the decade of the 1870s to just over 14% of total players. Overall, the database currently represents 47.9% of all players who appeared in an MLB game. With several thousand additional salary observations recorded but awaiting entry, the database will grow considerably, and as it affects the leaders table, I will continue to make updates.

New Salary Leaders 1874-1880

year	salary	player
1874	\$2,800	Fergus Malone (Ch NA)
1875	\$2,200	Rich Higham (Ch NL)
1876	\$4,000	Al Spalding (Ch NL)
1877	\$2,900	Al Spalding (Ch NL)
1878	\$3,700	Bob Ferguson (Ch NL)
1879	\$1,800	Frank Flint (Ch NL)
1880	\$1,800	Adrian Anson (Ch NL)



The 1869 Cincinnati Red Stockings, baseball's first professional team.

**100 Years Ago:
Charles Ebbets Sells Share of Dodgers to
Finance New Ballpark**

Ebbets Field opened on April 5, 1913 when the crosstown Yankees visited for an exhibition game. The stadium had been five years in the planning, involved secret negotiations, nearly bankrupted team owner Charles Ebbets, and eventually led to an ownership structure that would hamstring the team for years after Ebbets died.



Ebbets Field in 1913

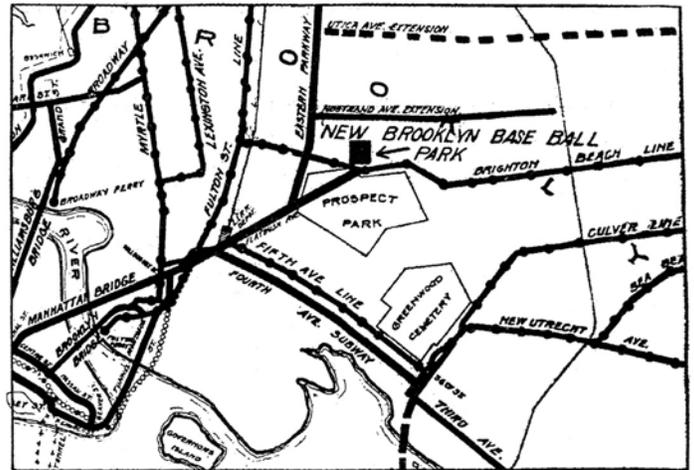
When Ebbets decided to construct a modern concrete and steel stadium, he was determined to build it in Brooklyn. In order to secure a suitable plot on which to build, Ebbets cast a wide net, eventually settling on an area that was underdeveloped yet well served by mass transportation. Unfortunately, the area he selected was in the hands of more than two dozen different owners. In order to prevent the landowners from holding him up for higher prices, Ebbets had to purchase the land without anyone knowing its intended use.



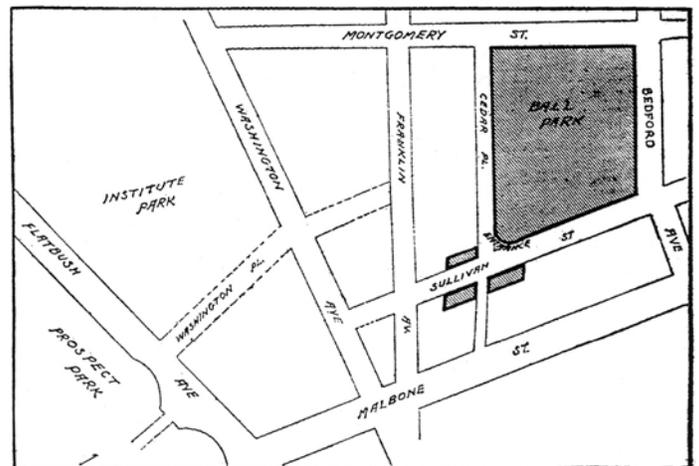
Charles Ebbets

He began purchasing land for his stadium scheme in September of 1908. Only three other people were in on his plan: his son Charles Jr., and Barney and Frank York, father and

son attorneys who did some legal work for the club. York hired realtor H.C. Pyle to purchase the land for the "Pylon Company." Pyle was instructed not to mention that he was working for York, and he was never told that York was working for Ebbets. Pyle in turn hired agents George Gray and Charles Brown to do the negotiating. Gray and Brown never knew who owned the Pylon Company.



This Shows the Location of the Ball Park and the Transit Lines Leading to It.



Tint Shows Property in Flatbush Bought by the Owners of the Brooklyn Baseball Club for the Erection of a Great New Ball Park.

Even the drawing of the building plans was secret. 38 year old architect Clarence Van Buskirk was hired to draw up plans for the stadium. Whenever he came to the team office, Van Buskirk hid the plans in an inner coat pocket to disguise the true nature of his visit. Ebbets kept the location of the stadium so close to the vest that even his architect did not know exactly where the stadium he was designing would be built.

A total of 30 individual parcels of land had to be pieced together to provide enough real estate for the ballpark. Ebbets filed the deed for the purchase of

the final one on December 29, 1911. As recently as October 30th of that year he was still creating a diversion regarding the intended location for the by-now expected new ballpark, when he mentioned a possible move to Fulton and Crescent Streets, five miles east of the actual site.

The land acquisition cost Ebbets \$200,000 and the original construction estimate was \$475,000. The final cost of the stadium, including land, was close to \$750,000.

Ground was broken on March 4, 1912, and while the original opening date was projected for later that season, delays would push it back to opening day of the 1913 season. Speculation for the delays focused on equipment and material shortages, but the most likely shortage was cash.

Ebbets was not a wealthy man, and the ballpark nearly bankrupted him. He solicited loans from his fellow owners but was refused. In order to finish the ballpark he sold 50% of the club to contractors Steve and Ed McKeever in August of 1912 for an amount reported to be between \$100,000 and \$500,000. Given that his initial estimate for financing the construction required him to borrow nearly \$425,000, the higher figure seems more likely. Part of that sale price may actually have included in-kind contributions, as the McKeever stepped in to finish the construction job.

As part of the sale, two corporations with an interlocking directorate were created. Ebbets Field was owned by the McKeever Exhibition Company, with Ed McKeever as president, Steve as vice president, and Charles Ebbets Sr. as treasurer. The team was owned by the Brooklyn National Baseball Club, with Charles Sr. as club president, Ed McKeever as vice president, and Steve as treasurer. Charles Ebbets Jr. served as secretary of both companies.

Even though it was located in a desolate area of Brooklyn known as pig town, the future site of the ballpark was easily accessible. There were nine trolley lines that served Ebbets Field and the subway and train could bring fans from Manhattan out to the ballpark. Those who fancied automobiles would find parking across the street, conveniently owned by Ebbets.

Author Peter Golenbock vividly describes the area as wild and craggy with a large garbage pit where farmers would bring their pigs to feed. Hence the name “pig town.”



Pig Town in 1912, future site of Ebbets Field

The devotion to building the new stadium in Brooklyn was due in part to Ebbets’s long history with the club. He had been with Brooklyn since its inception in 1883 as an International Association franchise. He began his career as an errand boy, working his way up to front office duties, and eventually purchased a sizable ownership interest in the club in 1897, though evidence suggests that he may have bought a handful of shares in the team as early as 1890.

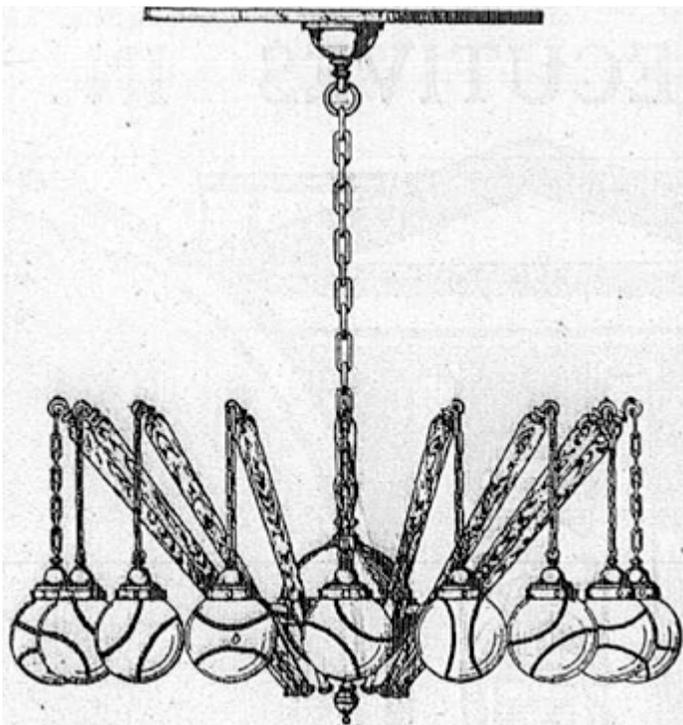
In 1897 Ebbets paid \$25,000 for a stake in the club. Contemporary reports put his share at anywhere from 22-40%. In order to make the purchase he borrowed the money from a business associate, Henry Medicus, who also purchased some stock in the team. The Brooklyn franchise underwent a complicated series of ownership changes over the next decade, resulting in Ebbets accumulating a majority ownership position. At the time ground was first broken for Ebbets Field, he owned 70% of the stock and Henry Medicus 30%. As part of the sale to the McKeever, Medicus was repaid and his shares bought out, leaving Ebbets and the McKeever as joint owners of the team and stadium.

Ebbets Field was lauded when it opened for both its elegant design and its creature comforts. It featured new means of egress, the first curved back seats, which were wider than standard seats because they

eliminated the armrest, and parking located across the street. This was novel and convenient for patrons arriving in automobiles – a mode of transportation used by a small but growing contingent of baseball fans.

The famous rotunda at the home plate entry at the intersection of Sullivan and Cedar Streets was magnificent, and sporting 14 ticket windows around its circumference was designed to provide efficient and easy access for fans under the comfort of a roof. Unfortunately, the first game would reveal its design flaws, as all the ticket lines crossed in the center, creating snarls that held up ticket buyers trying to enter a line as well as ticket holders seeking entry to the ballpark.

The floor of the rotunda was marble mosaic tile with a stitched baseball design in the center and the words “Ebbets Field” around it. And hanging from the ceiling was an elaborate chandelier with a ball and bat design. The glass globes containing the light bulbs were fashioned to look like baseballs and the fixture had facsimiles of baseball bats.



A sketch of the famous Ebbets Field rotunda chandelier

Somehow, despite all of its creature comforts and attention to detail, Ebbets Field lacked a press box when it was opened, an oversight that was never caught by the architect, engineers, or Ebbets

himself. A week before the season opened Van Buskirk showed off his creation to a delegation from the New York Society of Architects. They praised his design, but none of them mentioned the lack of a press box.

Without a press box, Ebbets roped off two rows of seats behind home plate in the front of the upper deck for the press. It would be sixteen years before a permanent home for the press was finally built.

While there is no evidence that a press box was intentionally omitted, there were other accoutrements that Ebbets had promised but never delivered on. The original plans for the stadium included bleachers in centerfield that Ebbets promised would sell for only 25 cents each. He also announced shortly before the 1913 season opener that an electronic scoreboard would be installed later that summer.

On March 16, 1913 the public was allowed for the first time to see the interior of the stadium during an open house. While the interior was nearly completed, the sidewalks and exterior were not yet finished. Steady rain the preceding week left a muddy mess, but it did not deter the faithful from turning out to see the grand new structure. Fifteen thousand anxious fans braved the cold and mud to catch a glimpse of the new stadium.



Genevieve Ebbets, youngest daughter of Charles, throws out the first pitch at the exhibition game to open Ebbets Field on April 5, 1913

The field was inaugurated on April 5th with an exhibition against the Yankees under their new skipper Frank Chance. The Superbas, as they were then known, won 3-2 before an overflow crowd

estimated at 25,000, with another 7000 watching from the hill beyond the outfield wall.

The first regular season game a few days later saw the Phillies dump the Superbas 1-0 on a cold, wet day before 10,000 brave fans. Ironically, just a few weeks earlier, Ebbets had announced that among the perks fans would enjoy at the new stadium would be a supply of umbrellas for use in case of inclement weather.

The press was effusive in its praise for the new stadium, with the *Brooklyn Daily Standard Union* gushing that it should last for 200 years. It outlasted Ebbets, who died in 1925, and it even outlasted the Dodgers in Brooklyn, but eventually fell victim to the wrecking ball on February 23, 1960, 153 years short of its predicted lifespan.



Ebbets Field meets the wrecking ball on February 23, 1960

After the Dodgers left following the 1957 season, the stadium served as a site for the demolition derby, a circus, soccer, and an occasional college baseball game. Its final shot at glory was an exhibition game on August 23, 1959 featuring Satchel Paige barnstorming with the Havana Cubans. The doubleheader attracted 4000 fans, but it wasn't enough to save the stadium.

By the time Brooklyn was abandoned by the Dodgers, Ebbets Field had faded from its glorious beginnings. The stadium was too small, obsolete, and lacked the parking necessary to accommodate the preferred mode of transportation for the modern fan. Walter O'Malley wanted an upgraded stadium,

and he found his solution 3000 miles to the west, forever changing the physical and emotional landscape of Brooklyn.

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All traces of Ebbets Field are gone, but one wall of its predecessor, Washington Park still stands along Third Avenue in Brooklyn

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