

# Relative Value of Draft Position in the NBA

Undergraduate Senior Thesis

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## **Abstract**

In light of the widespread adoption of advanced statistics in the National Basketball Association (NBA), this paper uses performance metrics to analyze the relative value of draft position in the NBA. The annual NBA collegiate draft gives every team an opportunity to acquire college players on to their rosters. Rational teams select players that they believe will maximize their number of wins in a season. Team salary caps and maximum player salaries set by the Collective Bargaining Agreement (CBA) are constraints to win maximization. By comparing historical player performance to player wage at every draft position, this paper aims to determine which draft position offers the highest value for teams. Results suggest that the highest team value in the draft occurs during the late first round of the draft, selections 26 through 30.

## I. Introduction

The annual National Basketball Association (NBA) draft provides a basis for all thirty professional franchises to acquire collegiate talent for their rosters. It consists of two rounds of thirty selections each, or an average of two selections per team per draft. The draft order is set in the inverse order of the thirty teams' records after the end of the regular season, allowing weaker teams the opportunity to draft the more talented college players.

An NBA team roster is made up of a maximum of 15 players and a coaching staff. All NBA teams will rationally acquire the players and coaches that they believe will maximize their number of wins that season. However, this goal comes with several constraints that are outlined in the Collective Bargaining Agreement (CBA), a legally binding document between the NBA and the NBA Players Association (NBAPA). The document is subject to renegotiation every few years; the current CBA was signed in 2011 and will run through the 2021 season. This paper will cover data that spans three CBA's – the first from 1995 to 1998, the second from 1999 to 2005 and the third from 2006 to 2011.<sup>1</sup>

According to the current CBA, every team faces a hard salary cap, the total amount of money a team is allowed to spend on its roster of fifteen players. If NBA teams cross this salary cap number, which in 2016 was \$70 million<sup>2</sup>, they are faced with a stiff luxury tax. In addition, the CBA sets a maximum amount that teams can bid for an individual player based on player tenure (the highest paid player in 2016 was Kobe Bryant with a salary of \$25 million per year). Teams cannot fill their rosters solely with experienced players because their individual salaries can represent about a quarter of the entire salary cap at their highest. Rookies, on the

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<sup>1</sup> Coon, Larry. NBA Salary Cap FAQ. N.p., n.d. Web.

<sup>2</sup> "RealGM - Basketball News, Rumors, Scores, Stats, Analysis, Depth Charts, Forums." NBA Salary Cap History.

<sup>3</sup> "RealGM - Basketball News, Rumors, Scores, Stats, Analysis, Depth Charts, Forums." ~~NBA Salary Cap~~ History.

other hand, can make a maximum of \$5.0 million per year through their first four years<sup>3</sup>. Therefore, rookies and early year players are crucial to any team's success as they provide performance at a relatively discounted salary. With fresh talent coming in every year, teams have relied on the draft to add rookies who can help rebuild teams and contend for future championships.

In order to analyze collegiate talent and find potential draftees for their teams, NBA teams send scouts to collegiate games. Scouts are supposed to rate and recommend players who can fit well with the team. These individuals usually rely more on intuition and the "eye ball test" rather than statistics or performance metrics for their recommendations.

The introduction of advanced statistics as a tool to rate players started in Major League Baseball. Starting in 1977, Bill James' annual *Baseball Abstracts* books brought in a new way to evaluate players that seemed to threaten conventional scouts. Bill James utilized box score numbers to provide new, unit-less statistics to value baseball players against one another. In the last two decades, baseball has reluctantly but slowly adopted Bill James' player valuation metrics to build a win-maximizing team.

Analytics have crept into the NBA as well. For a long time, the prowess of NBA teams as a business has been known; their ability to accrue millions of dollars through TV contracts, ticket sales, merchandise sales, etc. is definitely eye opening. Yet for years, the economics that drove the business side of NBA franchises did not translate to the sporting side of the franchises. More precisely, the tenets of economics that drove the profit-maximizing nature of NBA franchises as a business were not matched by the win-maximizing nature of sports teams. Now, the arrival of advanced statistics allows general managers to more easily compare player

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<sup>3</sup> "RealGM - Basketball News, Rumors, Scores, Stats, Analysis, Depth Charts, Forums." 2015-2016 Rookie Scale.

performance and salary, and, therefore, make more economical and rational decisions about the make-up of their team.

The application of advanced statistics comes at an interesting time for the NBA. A new lucrative TV contract beginning in 2017 will trickle revenue down to NBA teams, portending a large increase in the salary cap. The current \$70 million salary cap is projected to skyrocket to \$109 million by 2018.<sup>4</sup> At the same time, rookies getting paid a maximum of \$5.0 million per year in 2016 will only receive a salary increase to \$5.2 million per year in 2018.<sup>5</sup> Now, more than ever, rookies are viewed as integral and relatively inexpensive parts of a NBA team. There is a sense among NBA general managers that draft picks are now worth much more than they were prior to the new TV contract deal.

Unsurprisingly, different teams have varying theories as to how rookies factor into their teams. Some believe in “tanking”—intentionally trying to lose games—in order to gain a higher position in the draft. Some owners and team managers believe this is an optimal strategy to build a young, relatively inexpensive team that can win for many years to come. While this strategy may have its benefits in the long run, it does come with lowered team morale, an irritated fan base, and impatient players in the short run. Others still believe that veteran, experienced players are the key to winning games and rookies should be inserted to fill key gaps in the team or back up experienced players if injured. Overall, team building theory and the role of the general manager is quite complex, with multiple variables such as salary cap, current roster, and even fan bases influencing decisions. Regardless, all general managers agree that the draft is vital to their teams.

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<sup>4</sup> Bien, Louis. "NBA Salary Cap Projected to Hit \$108 Million in 2017."SBNation.com. N.p., 17 Apr. 2015.

<sup>5</sup> "RealGM - Basketball News, Rumors, Scores, Stats, Analysis, Depth Charts, Forums." 2015-2016 Rookie Scale.

This paper specifically measures the relative value of draft position for each team. To do so, we calculate an average performance value for each of the thirty first round draft selections by collecting advanced performance metrics on each player. By comparing the average performance metrics to the average wage for each draft selection, we develop a team surplus for every draft position. Analyzing the overall surplus value gives us insight into relative value of draft position for any team.

## II. Literature

The most popular and well recognized paper in this space is “The Loser’s Curse: Overconfidence v. Market Efficiency in the National Football League Draft” published in 2005 by Cade Massey and Richard Thaler. Using archival data on player performance and trades over a span of about two decades, this paper explores the true value of draft picks in the National Football League (NFL). The paper concludes that NFL teams generally overvalue top draft picks. They arrive at this conclusion using a surplus value (for the team) that is defined as the “players performance value (– estimated from the labor market for NFL veterans –) less his compensation.”<sup>6</sup> For example, say a team trades the 4<sup>th</sup> overall selection to another team in exchange for the 10<sup>th</sup> and 21<sup>st</sup> overall selection. Then, using historical averages on player performance and compensation, the paper determines a surplus value for the 4<sup>th</sup>, 10<sup>th</sup> and 21<sup>st</sup> picks.<sup>7</sup> On average, they find that teams that traded for higher draft picks generally did not receive as large of a surplus as those teams who traded for lower draft picks, suggesting that teams overvalue higher draft picks.

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<sup>6</sup> Massey, Cade, and Richard Thaler. "The Loser’s Curse: Overconfidence vs. Market Efficiency in the National Football League Draft\*." (n.d.): n. pag. 2 Apr. 2005. Web.

<sup>7</sup> Massey, 2.

The idea of the team surplus is central to this paper and will be borrowed directly from the Massey-Thaler paper. Again, surplus value (for the team) for a certain draft position is defined as the draftee's performance value less his compensation. This paper uses historical player performance to determine average performance for every draft selection. As for compensation, first round rookie wages are predetermined by the CBA, with the 1<sup>st</sup> pick receiving the highest pay and each subsequent pick receiving a preset fraction of that wage. Therefore, if performance were unpredictable by draft pick, the highest picks would be expected to have the least surplus value to the team.

Aaron Barzilai, Ph.D. and former executive with the Philadelphia 76ers, in 2007 published an article analyzing the value of draft position in the NBA. Without looking at draft day trades, Barzilai simply took all players drafted at a certain draft position over the last twenty-five years and assessed their performance value over their careers.<sup>8</sup> Value was measured through performance metrics such as Player Efficiency Rating and Win Shares and charted by draft position (from 1 to 60). This paper takes Barzilai's analysis a step further by comparing performance to compensation at every draft position and calculating an overall team surplus.

### **III. Data**

For this paper, we use performance and compensation data for every player drafted in the first round by the NBA from the 1995 through the 2011 NBA drafts. Because this paper is interested in measuring the relative value of draft position, we only use player performance statistics and wages from the first four years of his career, the span of every rookie contract.

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<sup>8</sup> Barzilai, Aaron. "Assessing the Relative Value of Draft Position in the NBA Draft." 82 Games. N.p., n.d. Web. 24 Apr. 2016.

The data comes from Basketball Reference, [www.basketball-reference.com](http://www.basketball-reference.com), a website that has extensive data on all draft results and player statistics. Basketball Reference uses data collected by Sean Lahman, an award winning database journalist and statistician, and others to display up-to-date statistics on NBA players. In addition, the website has several advanced statistics that are calculated using basic statistics such as points and rebounds. Because raw statistics such as points and rebounds cannot accurately reflect a player's true performance or value to the team, advanced statistics are crucial in gaining a sense of true value and are invaluable for comparing players across different generations and positions.

This paper uses two advanced statistics: Player Efficiency Rating (PER) and Win Shares per forty-eight minutes (WS). Both of these statistics provide a reliable measure of the player's worth on the court and the amount he contributes towards team wins. PER, perhaps the most widely used advanced statistic provides a single number of a player's effectiveness on the court. John Hollinger, an ESPN columnist, developed the metric in 2010 and said that "the PER sums up a player's positive accomplishments, subtracts the negative accomplishments, and returns a per-minute rating of a player's performance."<sup>9</sup> PER sums many of the written statistics such as points, assists, turnovers, rebounds and assigns each category a positive or negative weight. Statistics that help the team, like points and assists, are given a positive weight, while those that hurt the team, like turnovers or points allowed, are given a negative weight. In addition, certain statistics like points are given greater weight because they are more valuable to a win. The raw score is reweighted to a per-minute basis so as to not disadvantage players who only play for shorter durations in a game. The weights are distributed so that the league average PER is 15.0. PER scores of more than thirty are considered historically great,

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<sup>9</sup> For a detailed calculation of Player Efficiency Rating, visit "Basketball-Reference.com." Calculating PER. N.p., n.d. Web.

with the highest recorded PER in a season earned by Wilt Chamberlain with 31.82 in the 1962-1963 season.

While PER effectively sums up a player's individual contribution, Win Shares attempts to credit players with a certain percentage of a team's win. For example, a player with a WS of .10 implies that that player is responsible for ten percent of his team's win. This metric is different from PER because it not only focuses on a player's individual statistics but also the overall outcome of the game. Bill James first developed this metric during his valuation of baseball players. But as basketball started adopting advanced statistics, it was natural that it extended to basketball as well.<sup>10</sup> Offensive and Defensive Win Shares are calculated separately and then added together to form total Win Shares.

Offensive Win Shares are calculated by dividing the marginal offense generated by a player by his marginal points per win. Marginal offense and marginal points are calculated by comparing the player's offense and points to a league average. Defensive Win Shares are calculated similarly, using marginal defense instead of offense. Marginal defense is calculated using an individual Defensive Rating, an estimate of the player's points allowed, and comparing it to the league average rating. The two are then added together and divided by forty-eight to determine Win Shares per forty-eight minutes. WS are standardized so that the league average is zero. Average players have a WS rating of about .05 or five percent of their team's win. Michael Jordan has the best career WS rating of .2505 – or twenty five percent of his team's win.

Not only are PER and WS respected as valuable comparison tool for players, they fit with the "eyeball test" as well. The players with the highest PER or most WS are historically great

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<sup>10</sup> For a detailed calculation of Win Shares, visit: "Basketball-Reference.com." NBA Win Shares. N.p., n.d. Web.



players. ESPN recently published its Top 100 NBA players' rankings as voted on by an expert panel. Unsurprisingly, the three players with the highest recorded PER's appear fourth, first and third, respectively on the Top 100 List. The player with the highest WS appears first on the Top 100 List. In addition, all players in the Top 10 of both PER and WS are either already in the Basketball Hall of Fame or are active players with a high probability of making it into the Hall of Fame. This offers some empirical evidence that PER and WS are good measures of a player's value. Table 1 shows the top 10 career PER and WS leaders compared to the top 10 players ranked by ESPN.

**Table 1. Top 10 players by Various Metrics**

	<b>Win Shares</b> <i>Career Avg</i>	<b>Player Efficiency Rating</b> <i>Career Avg</i>	<b>ESPN All time Rank</b>
1	Michael Jordan*	Michael Jordan*	Michael Jordan*
2	David Robinson*	LeBron James	Kareem Abdul-Jabbar*
3	Chris Paul	Shaquille O'Neal*	Lebron James
4	Wilt Chamberlain*	David Robinson*	Magic Johnson*
5	Neil Johnston*	Wilt Chamberlain*	Wilt Chamberlain*
6	LeBron James	Chris Paul	Larry Bird*
7	Kareem Abdul-Jabbar*	Bob Pettit*	Bill Russell*
8	Magic Johnson*	Kevin Durant	Tim Duncan
9	Charles Barkley*	Neil Johnston*	Shaquille O'Neal*
10	Kevin Durant	Dwyane Wade	Hakeem Olajuwon*

1. \* Indicates membership in the Basketball Hall of Fame

2. All others are Active Players not yet eligible for the Hall of Fame

In addition, this paper uses data on rookie salaries and the overall salary cap from RealGM, [www.basketball.realgm.com](http://www.basketball.realgm.com), which has rookie salary scales and salary caps from 1996 to 2011. Rookie contracts are four-year contracts with the first two years at a predetermined guaranteed salary followed by two years of non-guaranteed flexible pay contracts. Furthermore, only first round draft selections (selections 1 to 30) have guaranteed contracts for the first two years while the second round selections do not. Therefore, this paper

only considers first round selections because their salaries are less variable. RealGM provides data on salaries for all thirty first round picks from 1996 to 2011. These salaries are adjusted for inflation and reported in 2016 dollars.<sup>11</sup> Table 2 displays these rookie salaries for various years.

**Table 2. NBA Rookie Salary Scale**

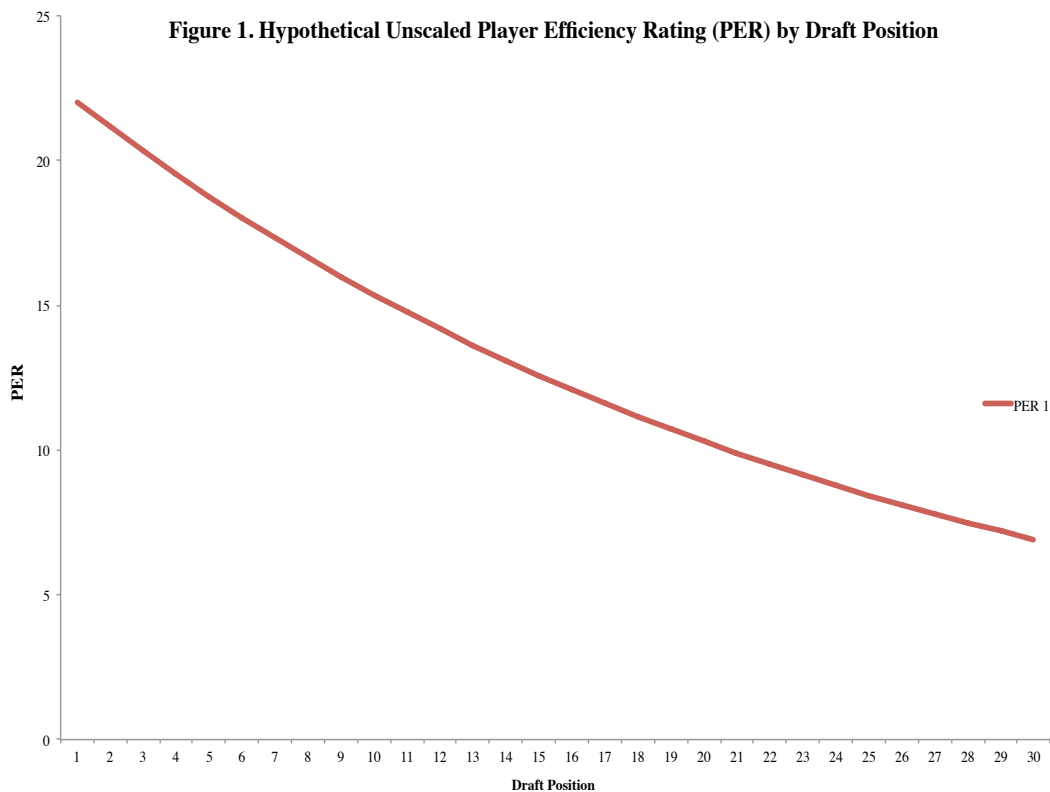
Selection	Unadjusted Scale	Unadjusted for Inflation				Adjusted for Inflation			
		2016	2011	2005	1998	2016	2011	2005	1998
1	1.00	\$4,966,833	\$4,464,400	\$3,744,333	\$2,844,200	\$4,944,242	\$4,853,847	\$4,544,141	\$4,135,729
2	0.89	\$4,443,967	\$3,994,400	\$3,350,100	\$2,544,700	\$4,423,753	\$4,342,847	\$4,065,697	\$3,700,228
3	0.80	\$3,990,733	\$3,587,067	\$3,008,500	\$2,285,300	\$3,972,581	\$3,899,981	\$3,651,130	\$3,323,037
4	0.72	\$3,598,067	\$3,234,067	\$2,712,400	\$2,060,333	\$3,581,701	\$3,516,187	\$3,291,781	\$2,995,914
5	0.66	\$3,258,233	\$2,928,600	\$2,456,233	\$1,865,767	\$3,243,413	\$3,184,073	\$2,980,896	\$2,712,996
6	0.60	\$2,959,333	\$2,660,000	\$2,230,967	\$1,694,633	\$2,945,873	\$2,892,042	\$2,707,512	\$2,464,153
7	0.54	\$2,701,533	\$2,428,200	\$2,036,600	\$1,547,000	\$2,689,245	\$2,640,021	\$2,471,627	\$2,249,480
8	0.50	\$2,474,900	\$2,224,600	\$1,865,800	\$1,417,267	\$2,463,643	\$2,418,661	\$2,264,344	\$2,060,836
9	0.46	\$2,275,033	\$2,044,867	\$1,715,033	\$1,302,700	\$2,264,685	\$2,223,248	\$2,081,373	\$1,894,246
10	0.44	\$2,161,167	\$1,942,600	\$1,629,267	\$1,237,600	\$2,151,337	\$2,112,061	\$1,977,286	\$1,799,584
11	0.41	\$2,053,200	\$1,845,433	\$1,547,800	\$1,175,733	\$2,043,861	\$2,006,418	\$1,878,417	\$1,709,624
12	0.39	\$1,950,500	\$1,753,200	\$1,470,400	\$1,116,900	\$1,941,628	\$1,906,139	\$1,784,484	\$1,624,075
13	0.37	\$1,853,000	\$1,665,500	\$1,396,867	\$1,061,100	\$1,844,572	\$1,810,788	\$1,695,244	\$1,542,937
14	0.35	\$1,760,400	\$1,582,300	\$1,327,033	\$1,008,000	\$1,752,393	\$1,720,330	\$1,610,494	\$1,465,725
15	0.34	\$1,672,200	\$1,503,100	\$1,260,667	\$957,600	\$1,664,594	\$1,634,221	\$1,529,951	\$1,392,439
16	0.32	\$1,588,700	\$1,428,000	\$1,197,667	\$909,733	\$1,581,474	\$1,552,570	\$1,453,494	\$1,322,836
17	0.30	\$1,509,200	\$1,356,567	\$1,137,800	\$864,267	\$1,502,335	\$1,474,905	\$1,380,839	\$1,256,723
18	0.29	\$1,433,767	\$1,288,800	\$1,080,900	\$821,000	\$1,427,245	\$1,401,227	\$1,311,785	\$1,193,810
19	0.28	\$1,369,233	\$1,230,733	\$1,032,233	\$784,100	\$1,363,005	\$1,338,095	\$1,252,723	\$1,140,154
20	0.26	\$1,314,400	\$1,181,500	\$990,967	\$752,700	\$1,308,421	\$1,284,567	\$1,202,642	\$1,094,495
21	0.25	\$1,261,833	\$1,134,200	\$951,300	\$722,633	\$1,256,094	\$1,233,141	\$1,154,502	\$1,050,775
22	0.24	\$1,211,433	\$1,088,833	\$913,267	\$693,700	\$1,205,923	\$1,183,817	\$1,108,345	\$1,008,704
23	0.23	\$1,163,000	\$1,045,400	\$876,733	\$665,967	\$1,157,710	\$1,136,594	\$1,064,008	\$968,377
24	0.22	\$1,116,433	\$1,003,500	\$841,667	\$639,300	\$1,111,355	\$1,091,039	\$1,021,451	\$929,601
25	0.22	\$1,071,833	\$963,400	\$808,000	\$613,767	\$1,066,958	\$1,047,441	\$980,593	\$892,473
26	0.21	\$1,036,267	\$931,433	\$781,200	\$593,400	\$1,031,553	\$1,012,686	\$948,068	\$862,858
27	0.20	\$1,006,367	\$904,500	\$758,667	\$576,300	\$1,001,789	\$983,403	\$920,721	\$837,993
28	0.20	\$1,000,233	\$899,000	\$754,000	\$572,700	\$995,684	\$977,423	\$915,058	\$832,759
29	0.20	\$992,933	\$892,467	\$748,500	\$568,567	\$988,417	\$970,320	\$908,383	\$826,748
30	0.20	\$985,733	\$886,000			\$981,250	\$963,289		

1. Salaries Adjusted for Inflation using the Consumer Price Index on the Bureau of Labor Statistics webpage
2. Prior to 2005, the NBA only had 29 teams and added the Charlotte Bobcats in 2005
3. Unadjusted Scale represents the salary scale for rookies as determined in the CBA

<sup>11</sup> Salaries adjusted for Inflation using Consumer Price Index data:  
<http://www.usinflationcalculator.com/inflation/consumer-price-index-and-annual-percent-changes-from-1913-to-2008/>

## IV. Methodology

The goal of this paper is to ascertain the relative value of each first round draft position by determining a team surplus value for that position in the draft. First, for every player in the data set, we average their PER and WS statistics over four years of their careers. We then average the PER and WS for every player drafted at a certain draft position. For example, all PER's and WS's for players drafted 1<sup>st</sup> overall are averaged to form one number. Figure 1 shows a hypothetical chart of average PER plotted by draft position. Since PER and wages have starkly different orders of magnitude, they must be properly scaled in order to effectively determine a surplus value. Thus, all performance averages and compensation are standardized to the first overall draft selection. For example, assume the PER for all 1<sup>st</sup> overall picks is about 20, then a PER of 15 for the 10<sup>th</sup> overall pick will be scaled to  $15/20 = 0.75$ . Similarly, if the compensation for the first overall pick is \$5.0 million, then the \$4.0 million compensation for the 10<sup>th</sup> overall pick is scaled to  $4/5 = 0.8$ .



Next, we chart scaled performance and compensation metrics by draft position to determine an overall surplus. Again, team surplus for a certain draft pick is determined by the performance minus the compensation. A hypothetical PER and compensation scales are charted in Figure 2. Take draft position 10 for example, because that position's performance value is greater than its compensation as compared to draft position 1, draft position 10 has a higher team surplus than does draft position 1.

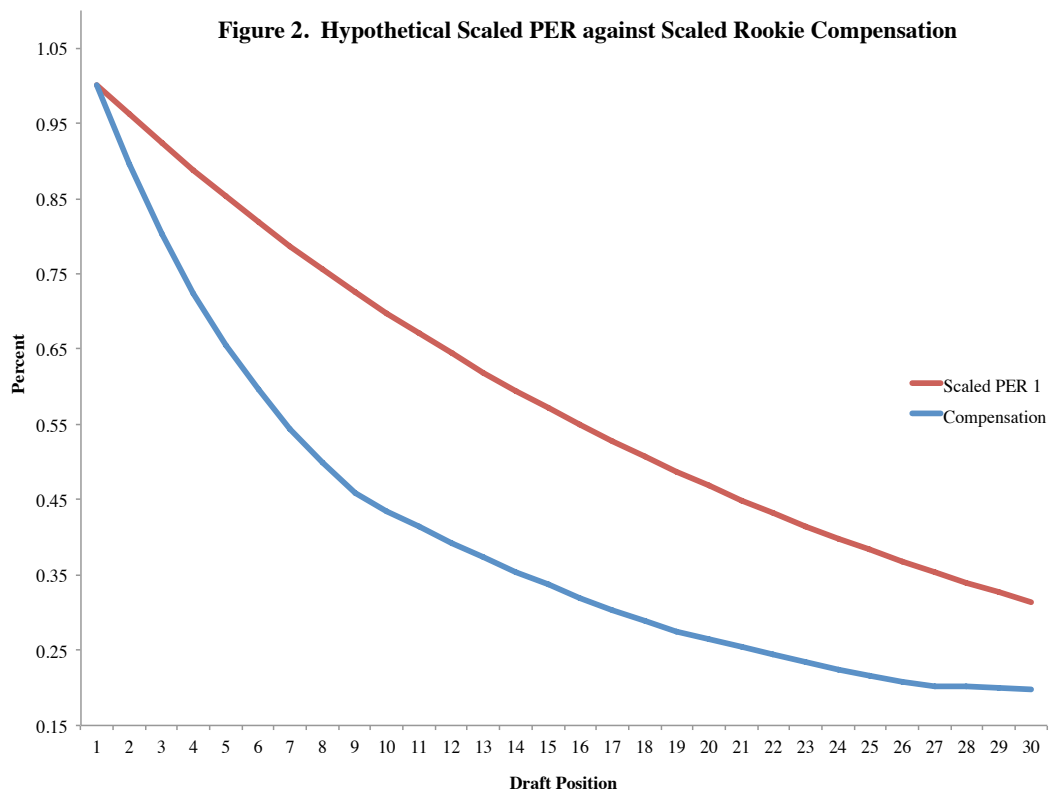
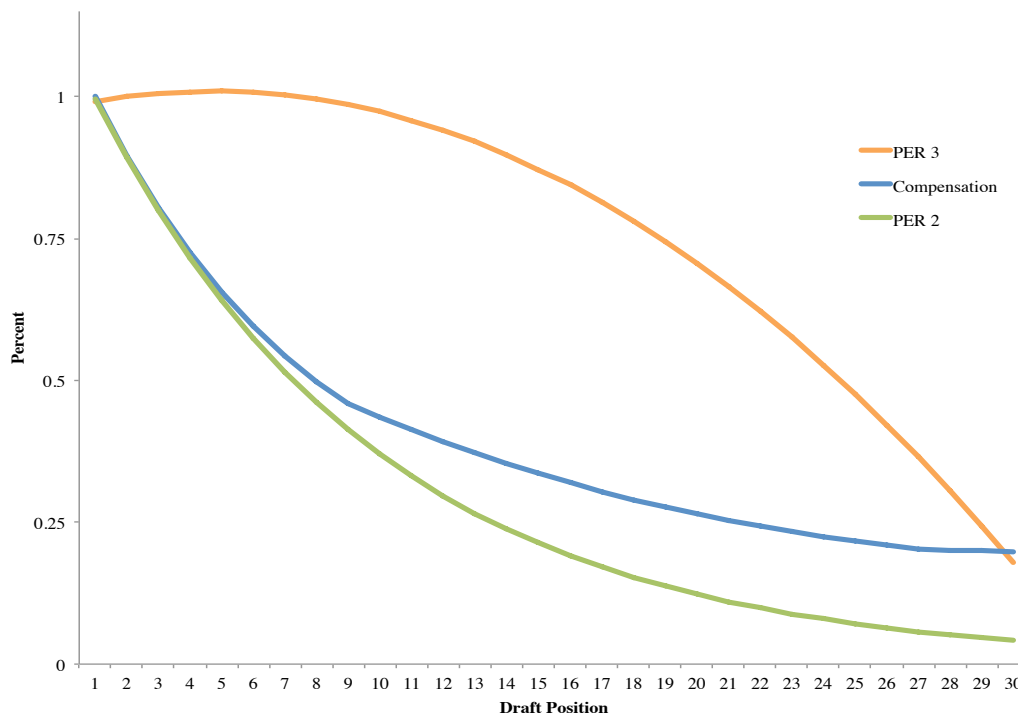


Figure 3 outlines two different hypothetical performance curves for a preset compensation structure for draft picks. According to Performance Curve 2, the first overall selection actually has the highest team surplus of any of the draft picks. In Performance Curve 3, team surplus maximizes towards the middle of the draft, and decreases towards the end.

Figure 3. Hypothetical Scaled PERs against Scaled Rookie Compensation



## V. Results

Figure 4 compares the actual overall scaled PER and WS against the actual scaled compensation. Both PER and WS are averaged and scaled by draft position for every player drafted in the first round from 1995 through 2011. Both metrics are fitted to a negative exponential curve with an  $R^2$  value of 0.5 and 0.3 respectively. This figure compares PER and WS against the 2016 rookie salary scale. If assumed that historical draftee performance is a good indicator for potential performance for players in the upcoming draft, this figure looks at the potential team surplus value at each draft position for the upcoming 2016 draft. From this figure, it is evident that team surplus value increases as the draft picks increase even though the surplus is much higher for PER than for WS.

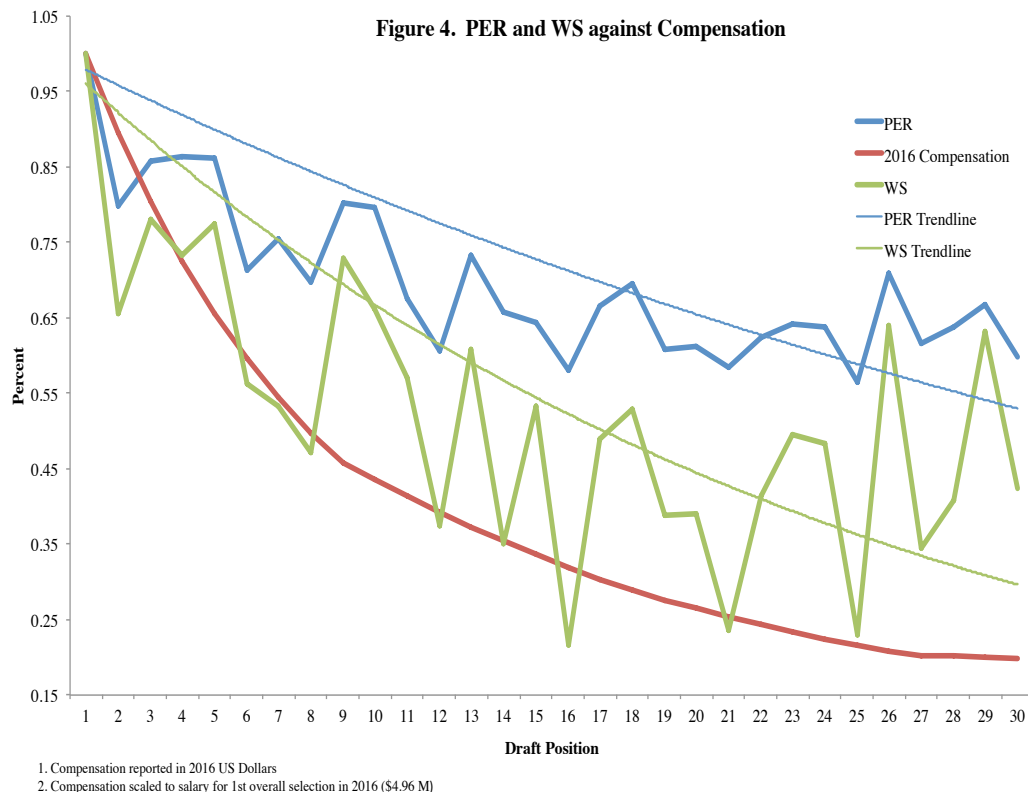
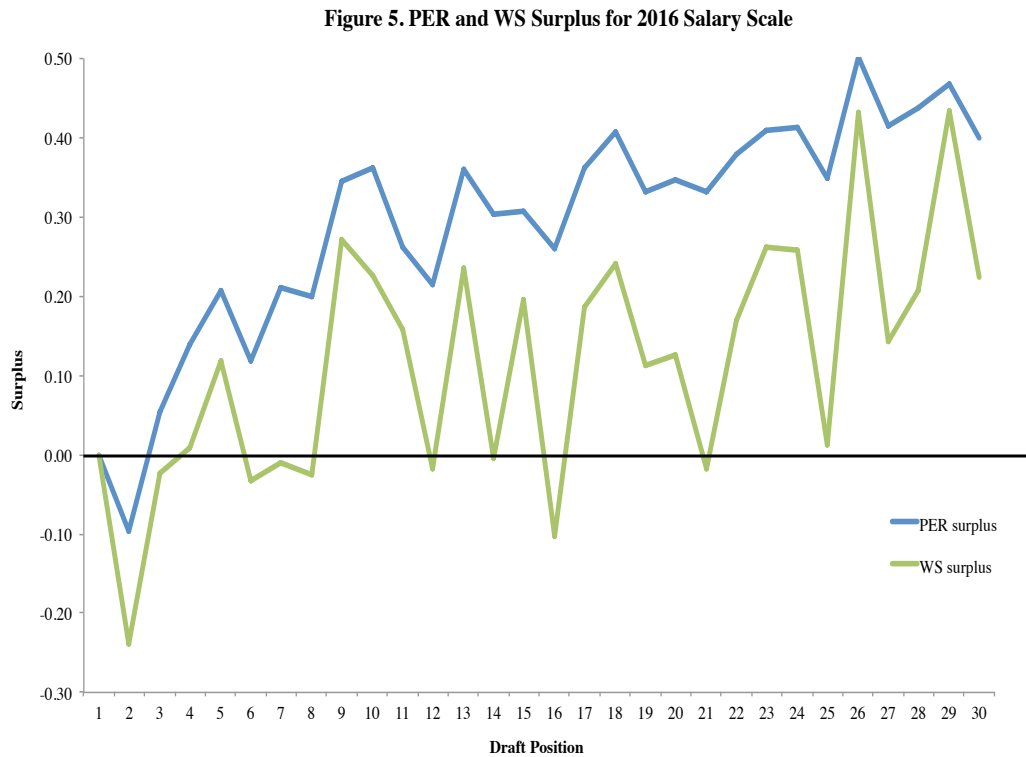
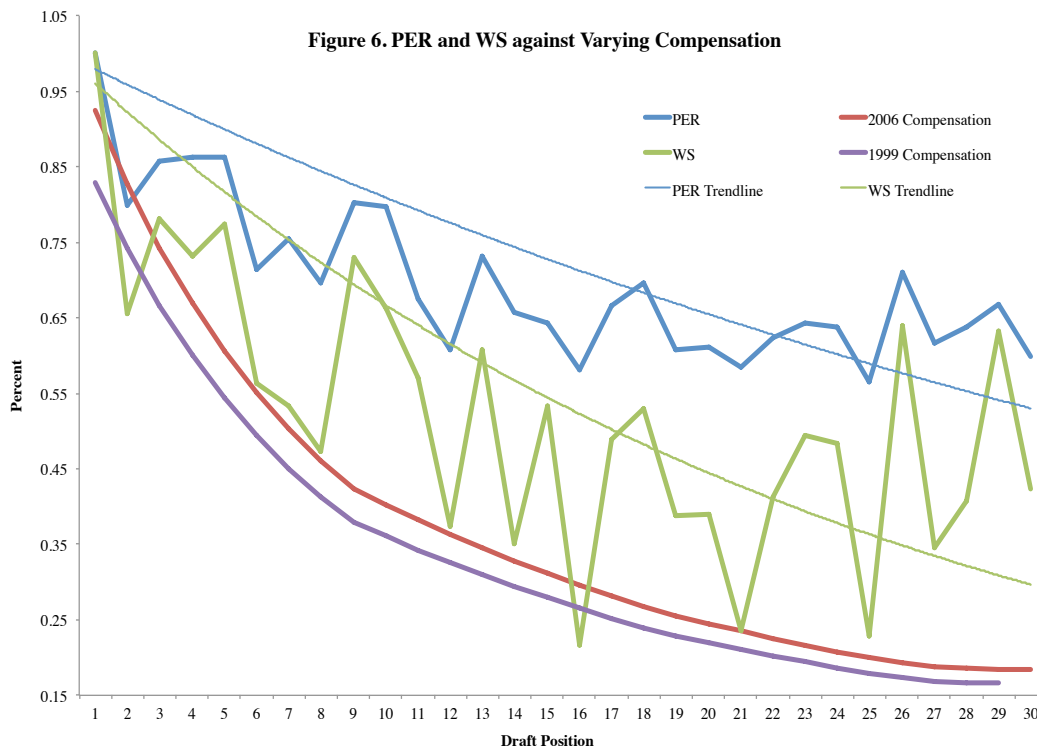


Figure 5 plots the actual team surplus values. Remarkably, the highest overall surplus for both metrics occurs towards the end of the first round, specifically at selection 26. These findings do not suggest that the team surplus for draft position 1 is zero, but is simply a result of scaling both curves to the first overall selection. It could be the case that the overall surplus for the first selection is positive, which would imply that the surplus value for the 26<sup>th</sup> pick is even greater than reported in Figure 5.



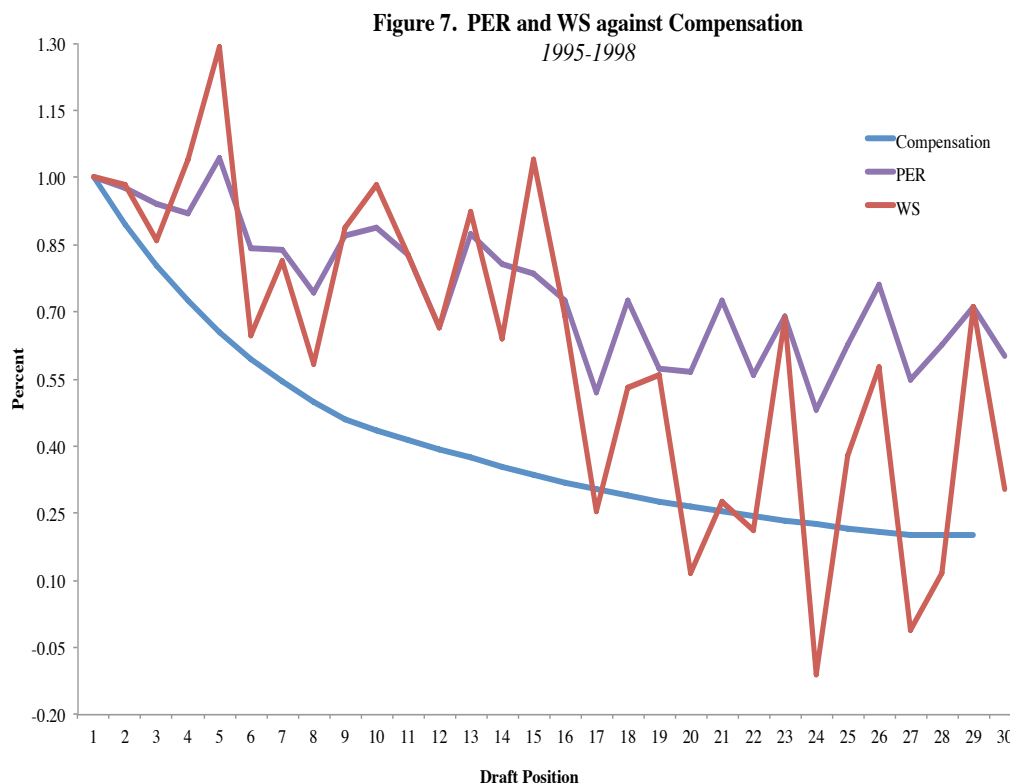
Next, we examine whether the same trend in surplus values exist under different compensation structures. Figure 6 compares PER and WS against 2006 and 1999 compensation structures. These structures have been adjusted for inflation and reported in 2016 dollars. Again, the highest trade surplus seems to occur at the end of the draft under either salary structure. However, this figure does suggest that rookie salary structure does not have a large effect on the overall team surplus. This is because the salary structure is predetermined based on the salary cap and historical precedent, rather than through the market value for draft selections.



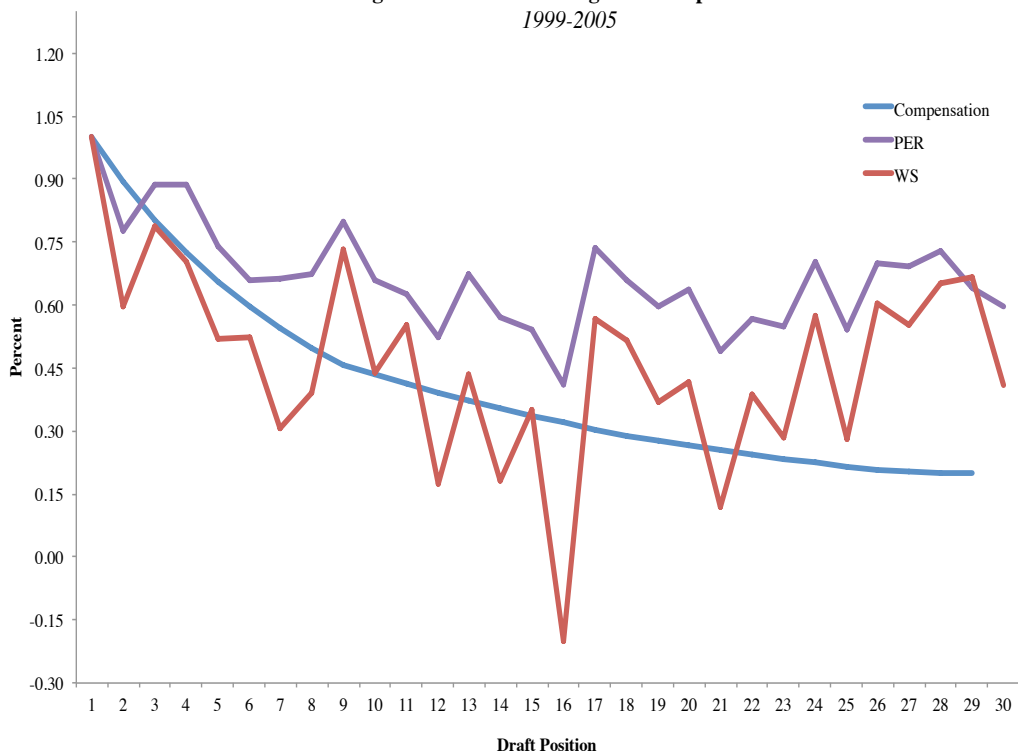


Another interesting result is the high variance in Win Shares. While both PER and WS seem to move together, WS definitely has a higher volatility compared to PER. The correlation between PER and WS has a coefficient value of 0.88. This suggests that both metrics agree with each other and value players similarly. The relatively high variance in WS as compared to PER can be explained by the calculation of both statistics. PER is a per-minute calculation of player efficiency, while WS takes a player's marginal offense and multiplies it by the number of minutes played in a season. Rookies and young players are not as skilled as experienced players and thus have comparatively lower player efficiency. However, coaches still support rookies by allowing them to play more minutes in a game so as to foster their growth and development. Therefore, their inefficiency is magnified in WS more so than it is in PER, leading to higher volatility in the former.

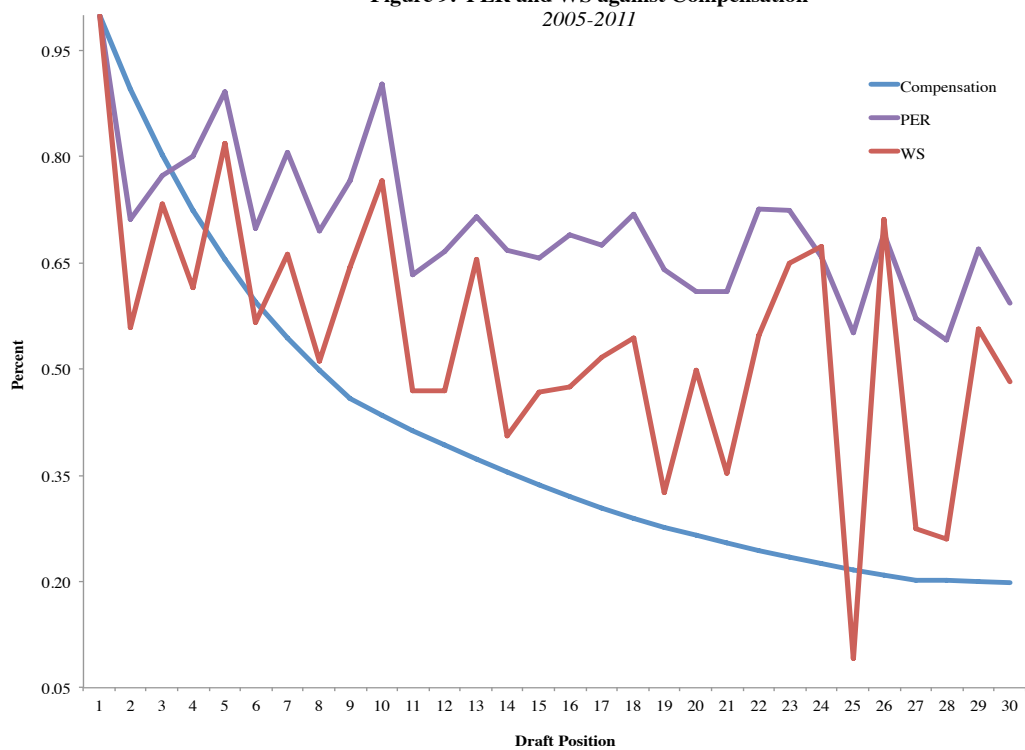
Lastly, Figure 7, 8 and 9 look at overall team surplus value under different CBA's. This dataset covers three CBA's: 1995 to 1998, 1999 to 2005, 2006 to 2011. While rookie salaries stayed fairly consistent through every CBA, CBA's have had different rules regarding salary caps, potential trades, maximum salaries, etc., that affect overall team draft strategy. We remove these variables by splitting players drafted under different CBA's. Figure 7, for example, compares overall player performance metrics for only those players drafted from 1995 to 1998 to a rookie scale under the same CBA. Figures 8 and 9 do the same for other two CBAs. Regardless, the results are still fairly consistent with Figure 4. The highest trade surplus value occurs towards the end of the first round, specifically picks 26-30. In addition, both PER and WS curves generally move together and align with the performance curve in Figure 4. Overall, regardless of the CBA or rookie scale, the greatest surplus value occurs late in the first round. This directly implies that late draft positions have the highest relative value for teams.



**Figure 8. PER and WS against Compensation**  
1999-2005



**Figure 9. PER and WS against Compensation**  
2005-2011



## **VI. Conclusion**

This paper set out to find a relative value in the first round of the NBA draft by examining team surplus value for every position in the draft. After comparing player performance with compensation under various circumstances, the results showed that highest team surplus occurs late in the first round of the draft. Over and above anything else, players chosen from picks 26-30 had the highest surplus for their teams.

However, these results do not imply that the 26<sup>th</sup> overall pick is better than the 1<sup>st</sup> overall pick. In every figure, it is evident that the 1<sup>st</sup> overall pick has the highest average player performance of any of the thirty picks. Therefore, if a certain team has enough money to spend on the first selection, then that pick is more valuable on performance alone. Again, overall draft strategy has many different variables to consider such as salary cap, trades, current roster and team goals. How this paper's result complements an overall draft strategy is left for further research. This paper simply suggests that late round draft picks give teams the most performance value given a certain salary.

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