Summer 8-9-2018

# The Connection Between Race and Performance of NBA Draft Picks

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The Connection Between Race and Performance of NBA Draft Picks

by

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Submitted in partial fulfillment
of the requirements for the degree of
Master of Arts in Economics
Hunter College, City University of New York

2018

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| August 9, 2018 | Ingmar Nyman |
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**Acknowledgements**

I would like to thank all of the people involved in helping me complete this thesis. To Professor Deb for helping me shape the topic and Professor Baker for helping guide me along the way. I would like to thank my family and friends for believing in me and never giving up hope. And to my amazing girlfriend, who motivated me every day and stayed patient with me through the process.

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**Abstract**

This paper uses data on collegiate basketball players who were drafted into the NBA from 1999 through 2003. It examines the relationship between race and performance in terms of one of the highest forms of efficiency in basketball, field goal percentage, based on college statistics, with regard to draft position, career earnings and NBA win shares. Comparing a baseline regression with a regression containing an interaction term, black and field goal percentage, we were able to observe that black players were much more sensitive to an increase in draft pick, career earnings and win shares, when looking at field goal percentage, than their white counterpart. Analyzing an organization that is predominately black can give us a better grasp on how to deal with issues the United States, and the world are dealing with today.

# 1 Introduction

With the role race and equality are playing in the world today, whether it be the Black Lives Matter movement or equal pay for minorities and women in the workplace, the United States and the world as a whole is more divided than we've seen in recent memory. It seems as if the decision makers in our country can't even come to an agreement on whether the sky is blue, much less policies that will make the world a better place. With our President being at the forefront of this turmoil it's easy to see why racial issues are at the precipice of American society. In addition to these disputes, President Trump has also prevented, or at least made it difficult, for certain types of Muslim groups to enter the United States or even just stay put in a place where they have lived for a majority of their life. The issue of race relations in our country seem to be as divided as ever, and places such as Baltimore and Ferguson have engaged in violent protests, even to the point of rioting. While these problems in the world seem to get worse and minority groups keep getting put into a box where their rights are being stripped back to the days of early American culture, it would be interesting to flip the script and look at a corporation, the NBA, where minorities are the majority and if this, or any, racial or performance based prejudice extends to a workplace that is predominately black.

# 2 Literature Review

Taking an analytical look into draft classes in any sport is no new venture. Baseball is the pioneer when it comes to sports analytics, most famously Bill James, who is credited with being the father of modern baseball analytics. His book, *The Bill James Baseball Abstract*, which was released in 1977, dove into the numbers in the box scores instead of only utilizing the "eye test,"

as many old-school baseball minds were doing. He tried to explain future performance by analyzing numbers to help paint a picture of how one player could be more valuable than the next player, even though on the surface they had similar basic numbers. He developed advanced statistics such as Win Shares, which is covered in this paper, as well as many other performance efficiency metrics that have been copied by most of the major sports leagues today. This lead to a huge phenomenon called Moneyball, in which the 2002 Oakland Athletics and their General Manager, Billy Beane, implemented these tactics in order to compete with teams who possessed much more buying power. Instead of only focusing on basic statistics, such as batting average, runs batted in and stolen bases, they looked at more advanced statistics that included on-base percentage and slugging percentage. They believed that they could acquire these players who excelled in such categories for pennies on the dollar compared to players who were being priced out of their range who, according to these metrics, were overrated. They went on to have a great season and inconceivably competed with teams who tripled their team salary.

When it comes to basketball, advanced statistics have only recently become a mainstay in the past 5-10 years. In that time frame, numerous papers have been published with an economic focus likening the 30 NBA franchises to a corporation and the players as their employees. However, starting with the basic scope, Staw and Hoang (1995) were some of the first to dive into the NBA in this light with their paper on sunk costs. Sunk costs in economics, as we know, are costs that have already been incurred and cannot be recovered. Looking at players from the 1980 draft through the 1986 draft, they concluded that teams were more likely to give a player drafted higher more playing time and opportunity to prove themselves due to the time they had invested in that player to that point. Higher draft picks are paid exponentially more and front offices are scrutinized heavily for missing on them as opposed to a player picked lower in the

draft. With more time it would be interesting to see how certain advanced statistics correlate with future performance in the NBA and if you would be able to predict a player's career path based on such statistics.

Groothius, Hill and Perri (2007) looked at superstar players playing in the NBA and where they were picked in the draft. Their study found that superstar players are usually identified early, however, more false positives exist than correct decisions with high draft picks. Seeing as many studies have reached the conclusion that draft pick has an effect on career length and playing time in the NBA, this sets us up to find out if race and performance tie into this equation at all by looking at a player's college statistics.

This is what Coates and Oguntimein (2008) look to do in their paper in predicting career length based on college production. They look at the players in the NBA draft from 1987 through 1989 that have at least one year of NBA experience using points, rebounds, assists, steals, blocks, field goal percentage and free throw percentage to try and assess the effectiveness of NBA executives in identifying college players who will be successful in the pros. Coates and Oguntimein discovered that blocks, free throw percentage and field goal percentage are important determinants of draft position for small conference players.. While big conference players see this positive correlation with points, assists, rebounds and field goal percentage. As you can see, both small and big conference players have a positive correlation with draft stock in respect to field goal percentage, hence, this paper's emphasis on race and performance in terms of just that, field goal percentage.

# 3 Background

The NBA and NFL are two of the few places in the country where African Americans have a large majority when it comes to race in the workplace. This offers a unique opportunity to look at wage equality and performance through the scope of one of the rare work environments where African Americans hold a significant majority. Is there still wage discrimination in the NBA for African Americans, where they are widely considered the better players in the league overall? Do they get drafted higher or lower in the NBA Draft compared to their white counterparts with similar college statistics? This paper will go in depth to look at the 1999 through 2003 NBA Drafts to compare black and white players in regards to draft selection, career earnings and NBA win shares based on college statistics, to attempt to paint the picture of whether wage and/or performance discrimination is still prominent in a workplace where black players have a significant majority over white players.

The NBA hasn't always been a black dominated sport. When the league was founded in June 1946, there were no African American players at that time in the league, since at that time the racial divide was extremely high. However, just 4 years later in 1950, the first African American player, Chuck Cooper, was drafted into the NBA. Even though Cooper was the first black player to be drafted into the NBA, he was not the first to play in an NBA game. That honor belongs to Earl Lloyd of the Washington Capitols, due to scheduling; his team played a day before Cooper's team. Lloyd had a great career, playing nine seasons in the NBA and having his best year in the 1955 season where he and his teammate Jim Tucker, were the first black players to play on an NBA championship team. Many black players back in the 1950's believed the NBA had an unwritten rule that no more than 4 black players were to be allowed on one team at a time. There was even a saying to go along with this: "You can play one black player on the

road, two at home and three if they were way behind." This was the way blacks were viewed in the early days of the NBA, but TIDES will help us understand the scope of the league, as we view it today.

The Institute for Diversity and Ethics in Sports (TIDES), who put out an annual *Racial and Gender Report Card* that breaks down the percentage of players by race in the NBA, revealed that, in 2016, the NBA was 18.3% white, including Non-Americans. Of the 30 teams in the league, 8 teams did not have a white American on their roster, and 10 other teams had only one. Contrasting this with 20 years ago, in the 1996-1997 season, there were only three such teams who did not employ an American born white player in the NBA. This speaks volumes to the change in the racial landscape of the NBA as it has progressed to the product we see on the floor today. To paint a picture of what this would look like in Corporate America, if you thought of each NBA team, 30 in all, as being a different office of a single company. It's unprecedented for that company to have 60% of their offices, that are located across the country, have only 1 American born white individual at each location or none, at all. So, for a league to go from what started with not a single black player in the 1940's to having about 75% in 2016, there is definitely a reverse racial majority study here worth pursuing more in depth.

# 4 Data Acquisition

The dataset for this paper was compiled almost exclusively from www.basketball-reference.com, an extensive database of basketball statistics. They have almost anything you could ever want to look at for a single player, from their bio, where they were born/went to school, to any advanced stat that you could dream up, such as their per 36 statistics, which is how that player would perform if their stats were extrapolated over 36 minutes played in a 48

minute game. The data includes all draft picks from the 1999 draft up until the 2003 draft to insure that players have both, completed a majority of their career, and were as recent as possible. Including players who are either retired or approaching retirement, makes it easier to determine how their race and performance in college affected their NBA careers. In these 5 draft classes there were 288 players selected overall. Out of those 288 players, 12 of them were drafted right out of high school, 49 were players drafted from international teams and 41 of them were players who never set foot on an NBA court. Seeing that our study requires players who have had both an NCAA career and an NBA career, these 102 players were removed from the dataset to ensure that our parameters were met. This resulted in 186 observations containing 195 variables for each player. After filtering out these players, we are left with 106 players who were drafted in the first round of their respective draft class and 80 players who were drafted in the second round of their draft class. This makes sense, due to the fact that first round picks have a much better chance of sticking with a team after being drafted because they have a certain percentage of their contract guaranteed, compared to second round picks who very rarely have any of their contract guaranteed. Opportunity cost comes into play here, as well, since teams are much more willing to give up on a player they drafted in the latter parts of the second round, as opposed to players they drafted in the lottery (which are players drafted in the top 14 of the 30 selections of the NBA draft) for the sheer fact that they have more development time and effort put into these players. The teams drafting in the lottery are teams that did not make the playoffs that year and therefore are afforded the luxury of drafting one of the better players in that years draft class to attempt to keep the balance of power more neutral.

The variables in the dataset include what round and pick that player was drafted, what team drafted them, basic statistics that are looked at as most important in basketball circles such

as; points per game, assists per game, rebounds per game, steals per game, blocks per game, overall field goal percentage and 3-point percentage, among numerous other basic and advanced statistics that player accumulated during their college and NBA careers. I have also created a dummy variable called BigConf, which signifies a player who went to a school that is part of a top conference in division 1 basketball. Big Conference is defined as equal to 1 if the player attended a school in the ACC, Big East, Big 10, Big 12, Pac-12, SEC. The rank of the school that player went to has been included, as well from the U.S. News and World Report website. The given school a player attended was assigned the ranking that corresponded with what the U.S. News and World Report determined. If the school was not ranked, they received a ranking of 999. Final Four and AP All American are variables that are put in place to measure the impact of a player on his team. They indicate how many times that player was in the final four or made an AP All American team. The age a player was drafted into the NBA is included in the regressions, as well. These variables make up the baseline regression for all 3 regressions with dependent variables Pick, Career Earnings and NBA Win Shares, respectively. Running the baseline regression, we are able to see the player's performance in regard to these variables. Then, adding in the interaction term of black and field goal percentage, we are able to see how race comes into play in determining that player's performance, more specifically, how race and performance effect their draft position, their career earnings and their NBA win shares.

# 5 Results

When we look at the baseline regression using draft pick (Pk) as the dependent variable, we see that there are obvious independent variables that jump out as significant when analyzing draft position on college statistics. First of all, one has college field goal percentage (CoFGpct)

with a .006 p-value and a negative coefficient of -85.14. With field goal percentage being just that, a percentage, we can interpret this as follows; with a 10% increase in one's field goal percentage, an extreme amount for the sake of interpretation, a player would raise their draft position by 8.5 spots. In the case with draft pick, a negative coefficient is a good thing because, as mentioned before, draft selection goes from 1-60 with 1 being the best and 60 being the worst. So, this causes the meaning of the signs to be flipped, making negative good for a players draft slot and positive moving them to a later pick. The fact that FG% is highly significant is understandable, seeing that teams would want players that are more efficient. However, when the interaction term is introduced later on, we'll see just how this affects a black player, everything else held constant. Another obvious variable significance is 3-point percentage at a .006 p-value and a -37.03 coefficient; this follows the same logic as FG%, in that players that can shoot a high percentage from the 3-point line are looked at in a much better light than those who aren't great shooters. For example, to be an elite 3-point shooter you should shoot above 40% from that range, being a decent to good 3-point shooter is in the range of 35-39% and shooting under 35% from the 3-point line is considered poor. Rebounds per game comes in significant at a .049 confidence interval and a positive coefficient of 1.43. It's interesting to see that raising one's rebounds per game by 1 actually decreases your draft stock by a bit less than 1.5 positions. I would expect that to go the opposite way, as rebounding in the NBA has been a huge plus among winning teams in the NBA for years. Moving on, we have steals per game, significant just below the .05 level with a p-value of .036 and a coefficient of -4.58. This makes sense, in that defense has always been said to "win championships" so, seeing that adding 1 steal to your per game total, you raise your draft stock by a bit less than 5 slots, isn't too surprising. Continuing with the defense theme, we have blocks per game being highly significant with a p-value less than .001

and a coefficient of -6.43. It seems that defense, in the form of steals and blocks is a big part of what is looked at in the draft. This jump in draft stock from these defensive statistics, rebounds, steals and blocks could stem from coaches and front offices in the NBA seeing players that are proficient in these categories as both fundamentally sound and athletically superior to their counterparts. Meaning they were taught well in the levels before college and have a great understanding of positioning, boxing out and moving your feet without reaching/fouling. However, a high number of blocks could also be an indication of off-the-charts elite athleticism, which scouts rave about and a great sense of timing that other players just do not possess. School Rank comes in significant at .039 and a minimal coefficient of less than 1. Even though the coefficient is very small, school rank would have a negative effect on your draft position, but not enough to make a difference, at all. Next up, we have the variable APAll-American, which indicates whether the player was picked as an Associated Press All-American after that given season. The honor is one of the best in the country and rewards players for their exceptional play throughout the season, in addition to being one of the biggest accolades a player can receive as a collegiate athlete. The p-value is very significant at less than .001 and the coefficient comes in at -6.59. Therefore, being selected an AP All-American raises your draft stock by just over 6 slots. This would seem to be obvious, however many times; some of the best college basketball players go in the 2$^{nd}$ round of the NBA draft or even undrafted. Lastly, we have age drafted which has a p-value of less than .001 and a coefficient 4.13, telling us that being a year older your draft pick drops by over 4 slots. This makes sense because most teams, obviously, want the most skilled players but the youngest players shoot up draft boards so they can be molded the way the team best sees fit. The younger the player, the more untapped potential they are said to possess for the future. Just outside of the .05 percent interval is where Final 4 variable lands. This tells us how

many times over a player's career, that they made the Final Four. You are considered "The Final Four" in college basketball if you are one of the last 4 teams standing in the NCAA Tournament that is held at the end of every season. The coefficient is -2.64, so we can conclude, if it were significant, that making the Final Four raises your draft pick by over 2 and a half slots.

In the next regression, what we ultimately want to see is the effect of race on draft pick in respect to field goal percentage. So, we add in the interaction term, which is our black dummy variable multiplied by field goal percentage. After doing this, we see that if a black player raised his field goal percentage by 10%, he would increase his draft position by 13.1 picks. This could be the difference between being a late first round pick to being a lottery pick, or from being a second round pick to being a first round pick.

Now we will look at lnCareerEarnings regressed on the same college statistics from the draft pick regression. First, we will analyze the baseline regression without the interaction term. When looking at this regression, we want to be able to interpret the coefficients in respect to lnCareerEarnings. To do this, we will look at the mean player for that certain variable and multiply this to the coefficient of the same variable in order to get the percent change in income one would see from either an increase or decrease of that variable. Steals per game comes in very significant at .015 with a coefficient of .80. Referring to the Summary Statistics table we can gather that an average player accrues 1.2 steals per game. Therefore if we multiply this to the coefficient of .80 to the average 1.2 steals, we come up with .96. This means that if an average player attained 1 more steal a game, an extreme example; they would look to increase their career earnings by 9.6%. Field goal percentage is significant, as well, with a p-value of .016 and a coefficient of 10.43. Seeing that the average player in the sample shoots 48% from the floor, as seen in the summary statistics table, we multiply .48 times 10.43 giving us 5.01. Raising your

field goal percentage by 10% would be no small feat, and in doing so you would increase your career income by 5%. Looking at Age Drafted, we have a confidence interval less than .001 and a coefficient that sits at -.55. The average player drafted in this sample is 21.54 years old. Therefore, if we multiplied this, 21.54 by -.55, you come up with -11.85.

Now, looking at the regression with the same interaction variable implemented from the previous regression (black multiplied by college field goal percentage) we can see that a black player that raises his field goal percentage by 10% would increase his career income by 8.3%, seeing that the coefficient comes in at 17.34, we multiply that by the same .48 average field goal percentage in our sample. This is significantly higher than a white player from the previous baseline regression. You can see that an efficient black player's pay scale is much more sensitive to a FG% spike and is drafted much higher than his white counterpart.

To tie this all together we will look at the final regression, where we have the same baseline regression and the black/college field goal percentage interaction regression but now with NBA win shares as the dependent variable. First, we saw how a player's race and performance in college determined their draft pick. Then, we looked at how race and performance dictated their career earnings. Both of these variables don't exactly translate to winning basketball games. You could be drafted number 1 overall in the draft and still not be a great player or you could make hundreds of millions of dollars and still not exactly contribute to a winning culture. However, when looking at win shares, it's pretty straightforward. Your final number is nothing but the amount of wins you attributed to your team and it will be interesting to see how race and performance compare to the amount of money a player made in their career or where they were selected in the draft.

Following the "defense wins championships" theme, the first significant variable is rebounds per game with a p-value at .017 and a coefficient of 3.11. Keeping with this theme comes steals per game with significance at .011 and coefficient at 15.39. After that, we see Final4 with a p-value, just above the .05 confidence interval, at .054 and a coefficient sitting at 7.55. Finally, we see age drafted at less than a .001 p-value and a -7.14 coefficient.

After adding in the interaction term we've been working with, black multiplied by field goal percentage, we can see that rebounds per game comes in significant again with a .020 p-value and a coefficient sitting at 2.98. This implies that grabbing one more rebound per game in college would increase your NBA win shares by 2.98. Next up we have steals per game sporting a p-value of .014 and a coefficient at 14.46, showing that if you increased your steals per game by 1 in college, which again is a sizable increase, you would raise your NBA win shares by 14.46, making you a far more valuable player. Now we look at the interaction term, which is highly significant at a .001 p-value and a coefficient of 289.06. This tells us that if a black player were to raise his field goal percentage by 10%, he would skyrocket his win shares by 28.9 points, compared to a white player. Making the final four affects your win shares in a positive way, as well, as we can see from the .044 p-value and the 7.75 coefficient. Last, we see age drafted with a p-value of less than .001 and a coefficient of -7.58 showing us what would seem to be an obvious case, that if a player is one year older they lower their NBA win shares by 7.58 over their careers. Seeing that a player's win share is a cumulative number over the course of one's career, this would seem to make sense.

# 6 Conclusion

Racial tension in society doesn't begin and end with a study on professional sports like the NBA and NFL. The way race is perceived has huge consequences on the economy, politics and social growth, not only here in the United States, but around the world. If we can identify and understand the motivation behind racial inequality within a smaller organization, for example the NBA, we may begin to go about healthier solutions that start to put the country in a more advantageous position to tackle discrimination and improve as a society. In studying the NBA, it gives us the opportunity to first, analyze something we love as people, the entertainment industry, but also try to bring awareness to social issues by analyzing race and performance in a basketball league. If further research were to be done on this topic, it could be expanded upon by adding in a larger number of variables that I just simply didn't have the resources to compile. An example of this would be to add in variables that measured athletic ability such as vertical jump, wingspan, lane agility and three quarter sprint. Using a variety of these statistics that are recorded during the NBA Combine, which takes place a few weeks before the NBA Draft, would have been interesting to include in these regressions to see how such athletic ability affected the results. However, due to the recording inconsistency in these statistics during this time period, many of the player's combine results were not available. Another avenue to explore would be to somehow evaluate international players and players who come straight out of high school, as this may be allowed to happen again in 2021, with the same criteria used to analyze college players. This would be difficult in the fact that a select few international leagues are considered much better than college basketball, while high school is considered much worse. If there were some way to incorporate all of these players into one dataset and analyze them side-by-side, this would be very advantageous for NBA teams. However, the results of this paper, especially in terms of

the interaction variable that connects race with the top form of performance efficiency for an NBA player, field goal percentage, go hand in hand when you think of economics as a whole. The overarching economic assumption is that decision makers are rational and it seems that hypothesis holds true throughout this paper. If a black player improves his efficiency in terms of field goal percentage, that player is much more sensitive to draft pick, career earning and win share spikes than his white counterpart. This paper will not solve the world issues on race and performance when it comes to wage inequality for minorities. However, looking at a smaller scale organization that is predominately black, can go a long way in understanding some of the root causes of what is plaguing the United States, and the world as a whole, in society today.

**Table 1**
**Summary Statistics**

| Variables | Obs | Mean | S.D. | Min | Max |
|---|---|---|---|---|---|
| Draft Pick | 186 | 26.199 | 15.567 | 1 | 57 |
| lnCareerEarnings | 184 | 2.326 | 1.889 | -2.956 | 5.294 |
| NBA Win Shares | 186 | 20.849 | 27.94 | -1.1 | 124.9 |
| Black | 186 | 0.769 | 0.423 | 0 | 1 |
| College Games | 178 | 93.315 | 34.707 | 17 | 146 |
| College Points | 178 | 13.808 | 3.715 | 5.4 | 23.9 |
| College Assists | 178 | 2.328 | 1.632 | 0.3 | 8.7 |
| College Total Rebounds | 178 | 5.884 | 2.041 | 2.1 | 10.8 |
| College Steals | 178 | 1.198 | 0.592 | 0.2 | 2.8 |
| College Blocks | 178 | 0.963 | 0.85 | 0 | 4.4 |
| College Field Goal Pct | 178 | 0.484 | 0.058 | 0.363 | 0.695 |
| College 3-point Pct | 145 | 0.329 | 0.084 | 0 | 0.5 |
| Big Conference | 186 | 0.747 | 0.436 | 0 | 1 |
| School Rank | 186 | 194.613 | 307.475 | 5 | 999 |
| Final Four | 186 | 0.339 | 0.622 | 0 | 3 |
| AP All American | 186 | 0.344 | 0.597 | 0 | 3 |
| Age Drafted | 186 | 21.543 | 1.352 | 18 | 25 |

**Table 2**
**Relationship Between College Statistics and Draft Pick**

| | Baseline Regression (1) Draft Pick | Regression w/ Interaction (2) Draft Pick |
|---|---|---|
| Black | 1.960 | 64.641*** |
| | (2.741) | (19.113) |
| College Games | 0.050 | 0.052 |
| | (0.041) | (0.040) |
| College Points | -0.585 | -0.816* |
| | (0.437) | (0.453) |
| College Assists | -0.363 | -0.643 |
| | (0.931) | (0.879) |
| College Total Rebounds | 1.426** | 1.486** |
| | (0.718) | (0.735) |
| College Steals | -4.585** | -4.164* |
| | (2.165) | (2.140) |
| College Blocks | -6.426*** | -6.508*** |
| | (1.691) | (1.719) |
| College field Goal Pct | -85.137*** | 7.991 |
| | (30.603) | (28.979) |
| Black#c.College FG Pct | | -131.016*** |
| | | (39.584) |
| College 3-point Pct | -37.032*** | -37.861*** |
| | (13.254) | (13.775) |
| Big Conference | 3.995 | 3.550 |
| | (3.317) | (3.277) |
| School Rank | 0.010** | 0.010** |
| | (0.005) | (0.005) |
| Final Four | -2.642* | -2.733* |
| | (1.428) | (1.492) |
| AP All American | -6.591*** | -6.454*** |
| | (1.706) | (1.710) |
| Age Drafted | 4.127*** | 4.328*** |
| | (0.981) | (1.018) |
| Constant | -6.291 | -52.101* |
| | (28.674) | (25.978) |
| Observations | 145 | 145 |
| R-squared | 0.501 | 0.527 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

**Table 3**
**Relationship Between College statistics and Career Earnings**

| | Baseline Regression<br>(1)<br>lnCareerEarnings | Regression w/ Interaction<br>(2)<br>lnCareerEarnings |
|---|---|---|
| Black | -0.468 | -8.764*** |
| | (0.342) | (2.568) |
| College Games | 0.007 | 0.007 |
| | (0.006) | (0.005) |
| College Points | -0.011 | 0.020 |
| | (0.054) | (0.054) |
| College Assists | 0.020 | 0.052 |
| | (0.143) | (0.131) |
| College Total Rebounds | 0.060 | 0.053 |
| | (0.096) | (0.096) |
| College Steals | 0.793*** | 0.737** |
| | (0.322) | (0.314) |
| College Block | 0.216 | 0.226 |
| | (0.250) | (0.252) |
| College Field Goal Pct | 10.428*** | -1.921 |
| | (4.262) | (4.077) |
| Black#c.College FG Pct | | 17.340*** |
| | | (5.203) |
| College 3-Point Pct | 1.858 | 1.966 |
| | (1.846) | (1.826) |
| Big Conference | 0.376 | 0.435 |
| | (0.404) | (0.396) |
| School Rank | 0.001 | 0.001 |
| | (0.001) | (0.001) |
| Final Four | 0.334 | 0.348 |
| | (0.224) | (0.216) |
| AP All American | 0.277 | 0.259 |
| | (0.250) | (0.249) |
| Age Drafted | -0.550*** | -0.576*** |
| | (0.127) | (0.131) |
| Constant | 6.342* | 12.401*** |
| | (3.249) | (3.424) |
| Observations | 144 | 144 |
| R-squared | 0.293 | 0.325 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

**Table 4**
**Relationship Between College Statistics and NBA Win Shares**

| | Baseline Regression (1) NBA Win Shares | Regression w/ Interaction (2) NBA Win Shares |
|---|---|---|
| Black | -2.880 | -141.175*** |
| | (5.256) | (41.184) |
| College Games | 0.000 | -0.004 |
| | (0.073) | (0.070) |
| College Points | -1.349* | -0.838 |
| | (0.815) | (0.798) |
| College Assists | -0.279 | 0.339 |
| | (2.159) | (1.997) |
| College Total Rebounds | 3.112** | 2.979** |
| | (1.281) | (1.264) |
| College Steals | 15.389** | 14.461** |
| | (5.980) | (5.798) |
| College Blocks | 0.273 | 0.453 |
| | (3.640) | (3.607) |
| College Field Goal Pct | 135.727* | -69.743 |
| | (72.742) | (69.990) |
| Black#c.College FG Pct | | 289.063*** |
| | | (87.959) |
| College 3-point Pct | 49.990* | 51.820* |
| | (28.585) | (28.205) |
| Big Conference | 0.194 | 1.176 |
| | (5.377) | (5.247) |
| School Rank | 0.014 | 0.012 |
| | (0.010) | (0.010) |
| Final Four | 7.549* | 7.750** |
| | (3.890) | (3.817) |
| AP All American | 6.543 | 6.241 |
| | (4.197) | (4.184) |
| Age Drafted | -7.142*** | -7.585*** |
| | (1.805) | (1.808) |
| Constant | 72.243 | 173.316*** |
| | (56.355) | (52.693) |
| Observations | 145 | 145 |
| R-squared | 0.325 | 0.362 |

Robust standard errors in parentheses
*** p<0.01, ** p<0.05, * p<0.1

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