

Measuring Greatness in the NBA

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Abstract

The “greatest player ever” debate stems from the controversy of how to measure a player’s effectiveness and contributions. Some analysts focus their arguments on a player’s statistics and advanced analytics. Another analyst may argue that awards play the largest role in a player’s worth to a team. Even though the tendency is to focus on one category of comparison, a player’s career is too complex to use only one category to rank players. In basketball, there are also so many exceptions in these points of comparison due to the team aspect of the sport. These factors all play a role in determining who is the greatest NBA player of all-time.

Keywords: NBA, MVP, greatness

Measuring Greatness in the NBA

An athlete's greatness should not be determined by only one factor like the number of awards won during a career. For example, determining greatness based on the number of medals in the Olympics is problematic due to athletes competing in different sports and only getting to compete every four years. It is difficult to compare across those gaps in Olympic competition. Monetary value is another example of a factor that cannot measure greatness by itself. Jesse Owens was a great track athlete, but his success on the track did not lead to money due to early retirement.

In NBA basketball, the greatest of all-time (GOAT) debate can become very complicated. The most valuable player (MVP) award is often one of the first things referenced when entering the greatness debate. Players are evaluated by the media in polls, but the polls sometimes measure on-court contributions, off-court image, or both. Statistical models, such as the IBM model, can measure value by finding the difference between a player's positive and negative statistics, but these particular models do not consider a team's tempo when compiling the statistics. Also, players could have the same statistical performance on two different teams, but they would have different value based on the performance of their teammates. Berri (1999) explained that points scored and surrendered are good indicators of team wins, but basketball is more complicated than points scored and surrendered. An individual cannot be evaluated based only on how many points he scores, because every statistic in basketball has a varying impact on the number of team wins. Berri tried to determine if Karl Malone or Michael Jordan was more valuable, and he found that Dennis Rodman was most valuable because of his

rebounding ability. Researchers are still searching for answers to why a player has a certain level of productivity, which is likely related to factors such as experience, coaching, and team chemistry. The debate has many different angles and factors, including awards, analytics, team dynamics, marketing, the basic eye test, and competitive greatness. These factors all play in a role in determining the greatest basketball player of all-time.

Awards and Accolades

An award most point to when debating greatness is the Most Valuable Player (MVP) award. MVP awards exist for the regular season, NBA Finals, and All-Star Game. Of these three types, regular season MVP's are most commonly used to compare players. If they are the most important, Kareem Abdul-Jabbar is the best player in NBA history with six MVP awards. Bill Russell and Michael Jordan are tied for second with five MVP awards. Looking at one award alone does not show the complete picture of a player's career.

Championships are another aspect people jump to in the GOAT debate. The issue with championships is that they are won by teams with individual contributors. If the sole factor in the debate is the number of championships won, then Russell is the greatest basketball player ever since he won 11 NBA Championships. Russell was a great player, but championships do not show the full picture of his career. K.C. Jones won eight NBA Championships, which is tied for third-most championships won in NBA history. He is not one of the greatest players ever though because he never averaged more than 10 points per game and benefitted from having teammates like Russell and Sam Jones.

All-Star appearances are another point of comparison between players. Unfortunately, this can be a complex thing to compare since fans vote for starters and reserves are selected by the coaches. A player with a long career will have more opportunities to be named an All-Star. Abdul-Jabbar played 20 seasons in the NBA and was named an All-Star 19 times. In comparison, Jordan played only 15 seasons and was selected as an All-Star 14 times. Additionally, the criteria have changed for being named an All-Star just in the last year with special team roster additions. For example, Dirk Nowitzki was named an All-Star in 2019 as a special team roster addition, even though he only plays limited minutes in 2019. Though they still need to be carefully considered in the debate, All-Star appearances are not an accolade that should be used alone to quantify greatness.

Additionally, All-Star starters and reserves should be clearly separated when looking at a player's value. Starters are selected by fans, so they are the most popular players and not necessarily the most talented among the players selected to play in the All-Star Game. In contrast, reserves are selected by the coaches or commissioner, meaning players who are talented and may not be as popular are being selected. These players may be just as or more talented than the starters, but they are not as popular. A player may be more popular due to the market they play in rather than his playing ability (Yang & Shi, 2011). Separating All-Star starters and reserves is another key component of the GOAT debate.

Finally, induction into the Naismith Memorial Basketball Hall of Fame should be considered when measuring greatness. The GOAT needs to be a Hall of Fame inductee in

order to be considered one of the greatest of all-time, unless they are not eligible to be inducted due to recent retirement or if they are still playing in the NBA. Also, first ballot selections should be given precedence as well as those with a higher percentage of votes. The list of Hall of Fame inductees is a good place to start when building a list of players to rank in the greatness debate.

When considering MVP awards and other accolades, a player's position should also be considered. Because each position influences the game differently, winning factors in basketball should not be generalized to every position. Dividing the players into guards, forwards, and centers, a study of the Korean Basketball League (KBL) found centers influence the chance of victory most by blocking shots and accumulating assists. Forwards increase win probability with higher field goal and free throw percentages, more assists, and fewer turnovers. Defensively, forwards should limit fouls that lead to free throws and grab more defensive rebounds. Guards increase win probability with higher two-point and three-point shot percentages, more assists, and fewer turnovers. Defensively, more rebounds and steals increase win probability. Fouls with free throws decrease win probability when committed by guards (Dai-Hyuk-Cochran et al., 2015). NBA basketball is becoming more positionless as centers become better perimeter shooters and guards become better finishers close to the basket, but a player's position should still be considered when measuring greatness.

Sports Analytics

Analytics have been successful as they have become more popular across high school, college, and professional sports. Analytics have improved game performance, but

they have also helped the business side of sports be more effective. The sports world has demonstrated how to integrate analytics into what an organization is already doing rather than being a separate and detached department. Decision-making should keep the traditional ways in mind, but it should also include analytics. Analytics programs are worthwhile, but they take time to implement before having effects within the organization (Shields, 2018). Baseball is one sport that has fully embraced analytics, and the analytics movement in the MLB has changed the way baseball is played. Defensive shifts and numerous pitching changes are now common in professional baseball. The NBA is only slowly beginning to embrace analytics, but analytics is a growing trend in the NBA that is a very effective way of measuring a player's productivity in basketball.

Box Scores

Concerning what analytics to use in basketball, box score statistics such as points, rebounds, and assists should not be the only factors to determine a player's value. Very few players contribute to box score statistics, which means that very few players can have an impact on team performance. The talent that allows players to use unique tactics and techniques sets great players apart from average players. Models that can predict team success and failure show that complex metrics rather than box score statistics can successfully be used to determine a player's value (Melo, Almeida, & Loureiro, 2008). Even though advanced metrics may be more effective, box score statistics still can indicate a player's value and should be utilized in the GOAT debate.

Box score statistics such as points continue to influence the perception of players. For example, one study shows there is a clear relationship between a player's draft

position and points scored in college. Studies have shown that the top factor NBA teams use to determine player compensation is scoring. Also, player compensation is assumed to reflect player quality. Thus, a player's ability to score is the primary factor used by NBA teams to evaluate players. Inefficient scorers are players that do not convert a high percentage of their shot attempts. Research has shown that players who score inefficiently still can be overvalued, even though it would be ideal for them to shoot efficiently by scoring the most points with the least number of shots possible. Ironically, Berri, Brook, and Fenn (2011) found that high scorers in college tend to offer less production in the NBA. Finally, they found draft position does not accurately predict future performance in the NBA. Overall, they found college statistics are a more accurate predictor of performance in the NBA than draft position, but neither indicator is very effective in predicting NBA production. Scoring in college basketball should not be the only statistic used to assess a player's potential and skill.

Based on financial compensation, scoring is valued most by NBA teams, but players can score large numbers of points if they get enough playing time and shot attempts. There is no evidence that a player's efficiency affects how a team values a player. The evidence suggests that players should solely value scoring if they want lucrative contracts rather than focusing on limiting turnovers, which have an influence on win probability but do not seem to influence the money a player earns. Other than points, rebounds and blocks are the only statistics that are statistically significant when analyzing player compensation. In the evaluation of players, missed shots and turnovers are

undervalued and the points scored statistic is overvalued (Berri, Brook, and Schmidt, 2007). Financial compensation is effective in determining how franchises value players.

Since teams tend to overvalue scoring, players with large contracts or players who score large amounts of points should not be simply considered the best. An example of a large contract that can be misleading is Chandler Parsons' \$94 million contract that is four years long with the Memphis Grizzlies. He is certainly not one of the league's best players, and injuries have limited him the last three seasons. Allen Iverson is a great player that scored lots of points during his career, but he shot very inefficiently. He averaged 26.7 points per game during his career and only made 43% of his shots. Scoring and financial numbers are a part of the greatness debate, but there are exceptions to using them to measure greatness.

Advanced Statistics

Analytics extends beyond simply using player statistics. Player statistics are generally a good indicator of a player's productivity, but they fail to include the effects that teammates or opposing teams may have on a game. Win probabilities are another form of analytics that can better evaluate a player's productivity and contributions in a team game like basketball. When a basketball game begins, both teams have a 50% chance of winning. As the game progresses, that win probability changes based primarily on points scored and point differential. The main statistic involving win probability is called win probability added (WPA), which measures the impact a player has on the score of a game. In basketball, a common way of measuring WPA is analyzing how win probability changes from the time a player enters the game until he is substituted out of

the game (Deshpande & Jensen, 2016). This analytic is a unique way to measure a player's contributions without using box score statistics like points, rebounds, and assists.

WPA is different from box score statistics in that it shows a player's contributions to the team's effort to win a game. Box score statistics can say LeBron James scored 42 points in one game, but the box score will not say that he scored 20 of those points in the last seven minutes of the game when the Los Angeles Lakers were already down 35. Though he did score those points late in the game and it was impressive to score 42 points, his contributions were not that impactful on his team's effort, because the Lakers still lost by 18. James did not score all those points at an important time of the game when they would have been more valuable or have been "clutch", which can be a misleading part of the box score.

There is a human dimension to sports and business. Therefore, analytics should not be the only method used to assess a player. Basketball analytics have tried to not only measure a player's individual statistics on the floor but also his impact on the team when he is on the floor versus when he is off the floor. This analytic is called the plus/minus approach (Davenport, 2014). The plus/minus approach is one of the best ways to measure a player's impact on his team.

Limitations of Analytics

The clutch factor is the part of analytics that is difficult to quantify. Many people consider Michael Jordan to be one of the most clutch players in NBA history. Jordan hit many significant shots late in close games, and those moments stick out in the minds of basketball fans and analysts. The greatest players are often considered to be the players

that can rise to the occasion and hit the big shots late in games. Win probability does a more effective job of measuring that clutch factor than box score statistics do. Still, it is difficult to quantify a player's individual contribution in a team sport like basketball, where so many people touch the ball and affect an individual's productivity on the court (Albert, 2015). Other than a few select analytics, most analytics focus on a player's individual contributions and achievements without accounting for the team aspect of basketball.

Team Dynamics

Minimal research is available that links player performance to revenue, postseason appearances, and championships. Professional sports are a good place to see the effects of talent relocation due to the vast amount of statistical information available on a player's performance in the past and present. A player's performance will vary based on his environment. The difficulty in assessing what a player's impact would be is due to the various dynamics that exist between players and the organization (Weinberg, 2013). A great player may not make postseason appearances and win championships depending on the organization, which needs to be considered when measuring greatness.

In the team setting, a widespread myth exists that more talent always equals better team performance, but there is a point when too much talent can be detrimental to a team. This can be due to team members fighting for status within the team rather than focusing on team success. Through multiple studies, researchers found support for the idea that there is a point where too much talent can be detrimental. The 2010-11 Miami Heat are an example of a team that had plenty of individual talent but did not play well together. In

the following season, they won the championship when two of their three stars were injured with a clear hierarchy and roles for each player (Swaab, Schaerer, Anicich, Ronay, & Galinsky, 2014). More talent does not always mean that a team will achieve better results. When considering the impact of a player's team, a team full of more talented players does not necessarily give a player an advantage on the court.

Additionally, a team's financial success is based on team wins rather than star power. Team payroll is not highly correlated with the number of team wins, meaning that adding more expensive and theoretically more talented players does not always increase team wins (Berri et al., 2007). The available financial data shows that more talent or star power is not always advantageous for a team.

Hierarchy and the use of player roles can be detrimental and beneficial, and researchers used NBA teams as a source of data in trying to show the beneficial aspects of hierarchy in basketball. They wanted to find evidence that contrasted what other researchers have found with the MLB, where hierarchy and differences in pay affect team performance. The researchers determined that assists, turnovers, defensive rebounds, and field-goal percentage best show team interdependence in basketball. They found that hierarchy did improve NBA team performance. Although some players earn more money or have greater roles on a team, their study found that those differences can be beneficial, especially in the NBA setting (Halevy, Chou, Galinsky, & Murnighan, 2011). Each player's role on a team is an important part of a team's success or failure.

Teams can influence a player's status based on the success of the team. These effects can be clearly seen in the NBA, where a player's value is often determined by his

team's success. Koster and Aven (2018) looked at how high-profile players associate with their teammates based on team success. Their hypothesis was that team performance affects how much a player affiliates himself with other teammates. Using Twitter and analyzing followers for different players, they found that high-profile players on successful teams are more likely to follow their teammates than high-profile players on underperforming teams. The researchers claim that high-profile players distance themselves from an underperforming team and their teammates to maintain their status as an elite player. Koster and Aven also made the point that a player who leaves a successful team for an underperforming team can affect his status. People begin to wonder why that player could not get the money he wanted with a more successful team than the one he chose, and that perception can lower a player's value. The performance of a player's team needs to be considered beyond wins and losses when considering a player's value.

When measuring greatness, the franchises a player played for must be considered along with the teammates he played with during his career. A team sport like basketball makes it challenging to measure individual contributions, but it does not make measuring a player's impact in a team setting impossible. Social factors such as market size influence a player's value. A star player on one team is not in the same situation as a star player who must share the court with another star. Chris Bosh was the star player for the Toronto Raptors and averaged over 22 points per game for five consecutive seasons before being traded to the Miami Heat. With the Heat, his production dropped significantly when he had to share the court with LeBron James and Dwayne Wade. Bosh is an example of a player influenced by his role on the team.

Identifying Star Players

Faubert (2013) analyzed over 100 professional athletes and found that they have the special ability to analyze unpredictable and complex visual scenes that do not pertain to a specific context. These learning and mental processing capabilities should be considered an integral part of what makes someone a world-class or elite athlete. Identifying these elite athletes is the first challenge. It is incredibly difficult to find elite athletes that also can be stars in the NBA.

Finding the next Michael Jordan

In professional basketball, teams are looking for the next Michael Jordan. Scouts tirelessly search for an elite athlete who will be the next star of their franchise. There are many false positives in this pursuit, and the pursuit is known as the dilemma of choosing talent. Using a model to show the dilemma of finding talent, researchers found that getting superstar talent is a rare occurrence. Also, their model shows great variation each season in player efficiency. They found that the NBA Draft usually does identify superstars accurately, but the process of finding a superstar is paralleled to a lottery ticket. It is rare to win money from a lottery ticket, but buying a ticket is the only way to win. In the same way, it is rare to acquire a superstar, but a player must be acquired in order to become a superstar (Groothuis, Hill, & Perri, 2009). Superstars are difficult to identify, but they can change the direction of the franchise singlehandedly.

NBA Draft

Teams feel so strongly about finding a star through the draft that they often resort to tanking. In order to maintain competitive balance in sports leagues, many leagues, like

the NBA, have adopted a reverse-order draft strategy, which encourages some teams to tank by losing intentionally for a higher draft pick. The research completed by Tuck and Whitten (2013) shows that tanking is an effective strategy unless more teams adopt the strategy, player ability is uncertain, or the number of teams in the league decrease. The model shows that teams can improve with a higher draft pick and be stuck in the middle of the league if they have limited success over a long period of time. Teams feel that the best chance of identifying that star player and acquiring him is through the NBA Draft.

Unfortunately, draft position explains very little about a player's productivity over his career. There are positive correlations between college and professional productivity, but studying these relationships becomes more difficult with different conferences and such a wide range of competition at the college level. Division I basketball is different in larger conferences than it is in smaller conferences (Coates & Oguntimein, 2010). Drafting players is always a risk for NBA teams with so many factors to consider.

In another study of NBA players and draft positions, researchers found that teams will draft All-Star caliber players earlier in the draft and prefer players with upside potential, which are generally underclassmen. According to statistics, the draft is effective at sorting talent. Early entry allows teams to get the most promising players and for players to extend their careers. Players that played all four years in college will play more minutes in their first NBA season, but they will not improve as quickly as those who enter early (Groothuis, Hill, & Perri 2007). Players that enter the NBA Draft early have a clear advantage over those who spend all four years in college.

Moxley and Towne (2015) found that scouts often look at untapped potential when determining whom to draft for an NBA team. They suggest many factors that determine talent, including practice time, previous performances, and basic abilities that can be objectively measured such as reaction time or wingspan. The authors found that players with better agility and long arms are drafted higher. Still, the authors' results do not show a relationship between athleticism and productivity. The study also shows that the myth that general managers draft centers too early is not true. Lastly, their study explains that starting a pro career earlier does give a player an advantage over those who start later. Players who start earlier have more time to develop skills and get better coaching. NBA performance can be best determined by current performance and the level of training or coaching the player has received. A player who declares for the NBA Draft early has a clear advantage since he will likely have a longer career that will allow him to accumulate more statistics. A player's age when he was drafted and made his NBA debut needs to be considered when measuring greatness.

The importance of having star players in the NBA should not be underestimated. Other than having too many star players as discussed in team dynamics, star players improve teams greatly, especially late in games. Caudill, Mixon, and Wallace (2014) found that NBA stars benefit from referee bias based on their study of the 2011 NBA Playoffs. In their study, the authors considered an NBA All-Star to be a star player, and this select group of players benefitted from more free throw opportunities and fewer fouls called against them on average. They compared a player's fourth quarter averages to the first three quarters and observed that players took more free throws on average in the

fourth quarter and committed no more fouls than in the other three quarters. A player's value is influenced by referees, who often protect star players to keep them from fouling out late in games. With the help of referees, star players help their team late in a game by getting to the free throw line.

A player's draft position needs to be considered when measuring greatness, because draft position influences the perception of a player. A player like LeBron James who made his NBA debut at age 18 had a lot more opportunity to develop in the NBA than Michael Jordan, who made his NBA debut at 21 years old. James' career statistics will be much higher simply due to more seasons in the NBA. Finally, the number of years that a player is considered a star should be included in the greatness measurement to include referee bias that leads to more free throw opportunities.

Marketing Star Players

Reputation, likeability, believability, and attractiveness all play a role in a company's willingness to endorse celebrity athletes. Celebrity athletes are considered more than just players of their sport. People consider them role models, entertainers, and marketable commodities. Social media is a medium used by athletes to promote their individual brands, and their use of it plays a role in their reputation. Athletes also use their social media accounts to endorse other products (Abeza, O'Reilly, Séguin, & Nzindukiyimana, 2017). A player's endorsements are evidence of a player's value off the court.

When measuring the popularity of an athlete, the location of the team he plays for should be considered. Athletes who play in larger cities have larger fan bases, so they

will have more fans and be perceived as more popular. The effects of larger cities can be seen in the number of votes a player receives in All-Star voting. Star teammates can also have an impact on a player's popularity. Numerous examples of star duos exist, including Scottie Pippen and Michael Jordan, Shaquille O'Neal and Kobe Bryant, John Stockton and Karl Malone, Dwayne Wade and LeBron James, and many others (Yang & Shi, 2011). A player's popularity is influenced in numerous ways, including franchise location and teammates.

The perception of a player is key to a player's value. For example, Brian O'Driscoll was a great Irish rugby player that many people considered to be the greatest Irish rugby player of all-time. Lunn and Duffy (2017) researched if that GOAT claim is biased or accurate through looking at O'Driscoll's impact on matches. Bias can come from things like the halo effect, which explains how first impressions can influence later judgments of a person. To make the subjective debate of greatness more objective, the authors found that he stood out from his peers in Ireland and was comparable to the best rugby players in the world. Lunn and Duffy believe that the ultimate impact a player can have on a team is increasing the team's chances of winning. A great player should make his teammates around him better. The authors acknowledge that many different elements go into the greatness debate, but they feel the only requirement is that the athlete was exceptional. Their research shows that O'Driscoll was exceptional, and the perceptions were accurate in this case. Sometimes, the public successfully identifies exceptional players and has accurate perceptions of a player's ability.

America's O'Driscoll in basketball is Michael Jordan, who is often considered the GOAT. This is a claim that many would support and list numerous statistics to affirm. Jordan averaged 30.1 points per game, 6.2 rebounds per game, and 5.3 assists per game during his illustrious career. He was an All-Star in 14 of the 15 seasons he played in the NBA and won five most valuable player (MVP) awards. Jordan was the scoring champion in ten seasons and is fourth in all-time points scored. He won six NBA championships and was named Finals MVP of all six series. He is in the Hall of Fame and simply dominated the game. Still, he may not be the greatest player ever, and his stardom may not be the only thing keeping him on that pedestal.

Jordan's success is not limited to his play on the court. He has been incredibly successful off the court as well, both during his playing career and in retirement. For example, he signed a lucrative endorsement deal with Nike and created his own Jordan brand that he is still reaping benefits from today. He is the controlling owner of the Charlotte Hornets as well. Some may argue that he is not a great NBA owner, but the fact that he is a former player and owns a team is an accomplishment by itself (Peter, 2018). According to Forbes, Jordan is worth \$1.7 billion today, primarily coming from the Jordan brand and his 90% ownership in the Hornets. He still has multiple endorsement deals years after his retirement, including Hanes, Upper Deck, and Gatorade ("Michael Jordan," n.d.). Jordan has been very successful off the court as well, which has positively contributed to his overall image.

Jordan's \$1.7 billion net worth can be attributed to numerous things. His success on the court clearly played a role in his popularity. People are drawn to greatness and

love to see people excel at something, even if they do not have an interest in basketball. His money management and smart investments like the purchase of the Charlotte Hornets franchise, which has risen in value tremendously, have increased his net worth. His value can be attributed to those things on the surface, but he would not have been able to accumulate that money without the value of his name. Marketing is ultimately the creation of value, and there is substantial value in the name “Michael Jordan.” The value of his success on and off the court was multiplied by effective marketing that is still occurring today.

Marketing can be defined as telling a story. According to Whitler (2018), storytelling should be a priority in marketing. It develops a deeper connection with the audience and is a powerful way of learning. Companies can engage consumers via storytelling that shows the brand in a unique way compared to other advertising and marketing efforts. Jordan had an interesting story that marketers could use to promote him as a celebrity, and his story became an inspiration to many people.

Jordan was born in Brooklyn but grew up in North Carolina, a state well known for its love of basketball. He was cut from the varsity basketball team in tenth grade when he was 5’11”. Then, he grew to 6’3” his junior year and became a high school All-American. He attended the University of North Carolina for three years and dominated his final two seasons of college basketball with two College Player of the Year awards. He also hit a game-winning shot to win the NCAA Championship his freshman year. (“Legends profile,” 2017). He was drafted with the third overall pick in the 1984 draft by the Chicago Bulls.

His story, among other things, played a role in his rise to stardom. Not just a celebrity in the United States, Jordan was an international star. He quickly rose to stardom by being named an All-Star his rookie season. Also, a star teammate like Scottie Pippen influenced Jordan's popularity. Having star teammates is something Yang and Shi (2011) found increases star status.

Yang and Shi also found that the marketing mix does not directly apply to star athletes as it does to most products. Athletes can increase their celebrity status by improving their performance or having the right team and teammates. These factors should be emphasized differently depending on an athlete's current status. A player trying to be a star should focus more on improving his individual performance. Once he is a star, he does not need to spend as much time improving his skills. A player that wants to be a star should join a team where he can achieve individual accolades early in his career, which is exactly what Jordan was able to accomplish. He scored 28.2 points per game and took his team to the playoffs in his rookie season. In his third season, he averaged 37.1 points per game while playing all 82 regular season games.

Then, Yang and Shi (2011) found that playing on a good team can help a player's star status increase or stay the same. Jordan was a member of the Bulls team that made the playoffs every year he played in Chicago, and the Bulls won six championships with him as their star player. Finally, star teammates can play a major role in increasing a star's brand equity. As mentioned before, Scottie Pippen was a complimentary star for Jordan. Pippen was a great defender and averaged around 20 points per game alongside

Jordan when they won multiple championships together. Pippen's value to Jordan and the Bulls franchise must be considered when measuring Jordan's greatness.

Jordan may not have been the greatest ever statistically, but he is still considered by many to be the greatest due to the perception of the general public. In a list of the Top 100 famous people from the year 1800 to the present, Jordan was the only basketball player included on a list of political figures, actors and actresses, musicians, and many other well-known people ("List of top 100 famous people," n.d.). In marketing, perception is what determines the value of something, because perception is far more influential than reality. Jordan may be the greatest ever simply because he is the most well-known basketball player among the general public, which may be what is leading people to believe he is the best ever. His perceived greatness may not be because he never lost in the NBA Finals or dominated the game on both ends of the court. Marketing arguably played the largest role in the overall perception of his greatness. Even if marketing has not had the greatest influence on his legacy, it may be another factor that caused many to consider Jordan one of the greatest ever to play the game.

Basic Eye Test

Players are also evaluated by more than just analytics, team success, or popularity. Scouts watch hours of film on a player and often travel to see a player in person if they want to assess a player. NBA scouts such as Bob Ferry rely on both analytics and the old-fashioned eye test (Stubbs, 2017). Others rely more heavily on analytics or the eye test. It is a matter of opinion, and there is no one right method that will always point to the best player. That is the beauty of basketball and sports in general.

An example of a player that is clearly elite when watching film is LeBron James. His high school film was enough for the Cleveland Cavaliers to draft him first overall in the 2003 NBA Draft. There was a clear understanding of the game that could be witnessed just by how easily the game came to James. In high school, he was tall and athletic and could make some unbelievable plays in transition. His skills in high school clearly translated to the NBA, but the eye test does not work for every player.

For example, Jimmer Fredette looked like a pure scorer with incredible range in college that would potentially score 20 points per game in the NBA. He could shoot from anywhere and had the size to be an NBA point guard at 6'2" and 195 pounds. The Milwaukee Bucks selected him with the 10th pick in the 2011 NBA Draft, and Fredette has unfortunately had very little success in the NBA. He played for five different teams and never averaged more than seven points per game. He looked like a great player due to the eye test, but Fredette has spent most of his basketball career playing overseas.

John Wooden's Pyramid of Success

John Wooden is arguably the greatest basketball coach of all-time. After coaching at the high school level and at Indiana State Teachers College, he took over as the head coach at the University of California, Los Angeles (UCLA). During his tenure at UCLA, the Bruins won 10 national championships and dominated college basketball. They had an 88-game winning streak in the early 1970s. Much of Wooden's success can be attributed to the Pyramid of Success, which sought to teach how players could best reach their potential ("John Wooden," 2016). The Pyramid of Success is arguably the greatest part of Wooden's legacy as a coach.

The Pyramid of Success has five levels and fifteen different blocks that lead to success. Outside of sports, it is applicable to any individual or organization. Each level builds on the level below it, and the top level is competitive greatness. It is a revolutionary model that allowed him to coach his players very effectively and lead them to unprecedented success (“The Pyramid,” n.d.), though Wooden’s definition of success, competitive greatness, is very different from the traditional definition.

Competitive Greatness

Competitive greatness is to “be at your best when your best is needed. Enjoyment of a challenge” (“The pyramid of success,” n.d.). In terms of measuring greatness, competitive greatness explains why the greatest players in basketball are valued. Players who can make clutch shots and perform in the biggest games are considered the best players. A player’s legacy is often rooted in these moments throughout their career.

LeBron James is arguably the greatest basketball player in the world right now, and the pinnacle of his career thus far was the 2016 NBA Finals. Playing for the Cleveland Cavaliers, James was behind 3-1 to the Golden State Warriors. The Warriors had Stephen Curry, who had won the last two Most Valuable Player (MVP) awards, and a supporting cast of Klay Thompson, Draymond Green, and Harrison Barnes. James had Kyrie Irving and an injured Kevin Love. James made an incredible block late in Game 7 that prevented Andre Iguodala from scoring and helped Cleveland win its first professional sports title since 1964. After promising a title and being able to win as an underdog, James will never be forgotten by the city of Cleveland (Withers, 2016). This

iconic moment of James' career will forever seal his legacy as one of the greatest basketball players ever.

Michael Jordan's iconic moment of his career became known as the flu game. Jordan played for the Chicago Bulls in the 1997 NBA Finals against the Utah Jazz. The series was tied 2-2 entering Game 5, and Jordan already had won four NBA Championships, including the 1996 NBA Championship. Entering the game, he was diagnosed with the stomach flu, and his teammate Scottie Pippen said he never saw Jordan as sick as he was before that game. Head coach Phil Jackson thought the Bulls would have to win without him, but Jordan played 44 minutes and scored 38 points, giving the Bulls a much-needed 3-2 lead that allowed them to win their fifth NBA Championship (Lincicome, 2016). This iconic moment of Jordan helped solidify his image as an incredibly dominant player.

Wilt Chamberlain is most well known for scoring 100 points in one game, the only player to complete that feat in NBA history. On March 2, 1962, Chamberlain and the Philadelphia Warriors played the New York Knicks in Hershey, PA. Chamberlain hit 36 of 63 shots and 28 of 32 free throws on his way to scoring exactly 100 points. The most remarkable part of that was hitting 88% of his free throws since he only shot 51.1% from the free throw line during his career. He also pulled down 25 rebounds in that game ("Wilt scores 100!," n.d.). His performance will forever be remembered with the picture taken after the game of Chamberlain holding up a piece of paper with a "100" written on it.

In another high-scoring performance, Kobe Bryant scored 81 points against the Toronto Raptors to have the second highest scoring performance in NBA history. Since Chamberlain had eclipsed 100 points, only a few players had scored more than 70 points in the following years. Then, Bryant exploded for the greatest moment of his career. He made 28 of his 46 shots, including 7 of his 13 three-point shots. He converted 18 of his 20 free throw attempts and helped the Lakers overcome a 14-point deficit at halftime (“Top moments,” n.d.). Bryant won multiple championships and scored 60 points in the final game of his career, but his 81-point performance will forever etch him in history.

These players, among others, have key moments that separate them from the average player and cement their legacies in NBA history. The greatest player ever is the player who never crumbled when his team needed him the most. He dominated the game statistically and made his team better. The greatest player ever was a star on and off the court. He made the simple game of basketball look easy and beautiful.

Competitive greatness can be seen when players react to situations where their team needs them. These moments need to be included in the greatness debate because they help strengthen their image in the minds of fans and fellow basketball players. Without these key performances, these players would not be as memorable and would not be worth considering in the greatness debate. Great players need to be at their best when they are most needed by their team.

Conclusion

Measuring greatness in any sport is very difficult, but it is extremely difficult in basketball. Defining what the term greatness means is the most important part of the

greatest player ever debate. Several factors are involved in making the ultimate determination of greatness. Using only one of the factors to make a case for a particular player is not an effective way to rank basketball players. Analytics, box score statistics, advanced metrics, and the basic eye test are just a few of the many methods that exist and should be considered when naming the greatest basketball player ever. One of these methods alone has its strength and flaws, but a combination of these methods is the best way to assess a player's greatness.

In future research, an analytic could be created that uses all these factors to make a final determination of the GOAT. Some of these factors carry more weight than others in the debate. Unless they are not eligible yet for the Hall of Fame, the player needs to be inducted into the Hall of Fame. Analytics, championships, and All-Star appearances should carry significant weight in the new analytic. Box score statistics should be valued less in the analytic due to their inferiority to advanced analytics in determining a player's value. Team dynamics and marketing should also be considered, but they do not mean as much in the debate as other factors. The best indicator of greatness is competitive greatness, as it encompasses the memorable moments that make up a player's career and usually are associated with important wins and championships. A player's legacy is based on how they played the game and how the game changed because of them. The GOAT is an exceptional player who rises to the occasion in the most important moments and achieves individual accolades while leading his team to great successes in the postseason.

References

- Abeza, G., O'Reilly, N., Séguin, B., & Nzindukiyimana, O. (2017). The world's highest-paid athletes, product endorsement, and Twitter. *Sport, Business and Management*, 7(3), 332-355. Retrieved from <http://ezproxy.liberty.edu/login?url=https://search.proquest.com/docview/1915319563?accountid=12085>
- Albert, J. (2015). Player evaluation using win probabilities in sports competitions. *Wiley Interdisciplinary Reviews: Computational Statistics*, 7(5), 316-325.
doi:10.1002/wics.1358
- Basketball Statistics and History. (n.d.). Retrieved from <https://www.basketball-reference.com/>
- Berri, D. J. (1999). Who is "most valuable"? Measuring the player's production of wins in the national basketball association. *Managerial and Decision Economics*, 20(8), 411-427.
- Berri, D. J., Brook, S. L., & Fenn, A. J. (2011). From college to the pros: Predicting the NBA amateur player draft. *Journal of Productivity Analysis*, 35(1), 25-35.
<http://dx.doi.org/10.1007/s11123-010-0187-x>
- Berri, D. J., Brook, S. L., & Schmidt, M. B. (2007). Does one simply need to score to score? *International Journal of Sport Finance*, 2(4), 190-205.
- Caudill, S. B., Mixon, F. J., & Wallace, S. (2014). Life on the Red Carpet: Star Players and Referee Bias in the National Basketball Association. *International Journal of the Economics of Business*, 21(2), 245-253.

- Coates, D., & Oguntimein, B. (2010). The length and success of NBA careers: Does college production predict professional outcomes? *International Journal of Sport Finance*, 5(1), 4-26.
- Dai-Hyuk, C., Su-Mi, K., Jang-Won, L., Sang-Hoon, S., Wi-Young, S., & Cochran, J. (2015). Winning factors: How players' positional offensive and defensive skills affect probability of victory in the Korea Basketball League. *International Journal of Sports Science & Coaching*, 10(2/3), 453-459.
- Davenport, T. H. (2014). What businesses can learn from sports analytics. *MIT Sloan Management Review*, 55(4), 10-13.
- Deshpande, S. K., & Jensen, S. T. (2016). Estimating an NBA player's impact on his team's chances of winning. *Journal of Quantitative Analysis in Sports*, 12(2). doi:10.1515/jqas-2015-0027
- Faubert, J. (2013). Professional athletes have extraordinary skills for rapidly learning complex and neutral dynamic visual scenes. *Scientific Reports (Nature Publisher Group)*, 3, 1154. doi:http://dx.doi.org/10.1038/srep01154
- Groothuis, P. A., Hill, J. R., & Perri, T. J. (2007). Early entry in the NBA Draft. *Journal of Sports Economics*, 8(3), 223-243. doi:10.1177/1527002505281228
- Groothuis, P.A., Hill, J. R., & Perri, T. J. (2009). The dilemma of choosing talent: Michael Jordans are hard to find. *Applied Economics*, 41(25), 3193-3198. http://dx.doi.org/10.1080/00036840701564459

Halevy, N., Chou, E. Y., Galinsky, A. D., & Murnighan, J. K. (2011). When hierarchy wins. *Social Psychological and Personality Science*, 3(4), 398-406.

doi:10.1177/1948550611424225

John Wooden. (2016, October 17). Retrieved from

<https://www.biography.com/people/john-wooden-21369183>

Koster, J., & Aven, B. (2018). The effects of individual status and group performance on network ties among teammates in the National Basketball Association. *PLOS*

One, 13(4). doi:10.1371/journal.pone.0196013

Legends profile: Michael Jordan. (2017, August 24). Retrieved November 15, 2018, from

<http://www.nba.com/history/legends/profiles/michael-jordan>

Lincicome, B. (2016, June 11). June 11, 1997: Michael Jordan shook off the flu for 38 points in Game 5. Retrieved from

<https://www.chicagotribune.com/sports/basketball/bulls/ct-michael-jordan-flu-game-june-11-1997-story.html>

List of top 100 famous people. (n.d.). Retrieved November 15, 2018, from

<https://www.biographyonline.net/people/famous-100.html>

Lunn, P. D., & Duffy, D. (2017). Are perceptions of greatness accurate? A statistical analysis of Brian O'driscoll's contribution to the Irish rugby team. *The Economic and Social Review*, 48(1), 85-107. Retrieved from

<http://ezproxy.liberty.edu/login?url=https://search.proquest.com/docview/1895911298?accountid=12085>

Melo, P. O., Almeida, V. A., & Loureiro, A. A. (2008). Can complex network metrics predict the behavior of NBA teams? *Proceeding of the 14th ACM SIGKDD international conference on Knowledge discovery and data mining - KDD 08*.
doi:10.1145/1401890.1401974

Michael Jordan. (n.d.). Retrieved November 15, 2018, from

<https://www.forbes.com/profile/michael-jordan/#50246d02d83c>

Moxley, J. H., & Towne, T. J. (2015). Predicting success in the National Basketball Association: Stability & potential. *Psychology of Sport and Exercise, 16*, 128-136.
<http://dx.doi.org/10.1016/j.psychsport.2014.07.003>

Peter, J. (2018, May 14). Michael Jordan may be greatest player, but he's the worst owner. Retrieved November 15, 2018, from

<https://www.usatoday.com/story/sports/columnist/josh-peter/2018/05/14/michael-jordan-greatest-player-nba-draft-lottery-worst-owner/608067002/>

The pyramid of SUCCESS. (n.d.). Retrieved from

<https://www.thewoodeneffect.com/pyramid-of-success/>

Rigg, C. (1993). Michael who? say NBA's marketers. *Crain's New York Business, 9*(42),

1. Retrieved from

<http://ezproxy.liberty.edu/login?url=https://search.proquest.com/docview/219141375?accountid=12085>

Shields, B. (2018). Integrating analytics in your organization: Lessons from the sports industry. *MIT Sloan Management Review, 59*(2), 108-115.

- Stubbs, R. (2017, May 17). 79-year-old NBA scout has embraced analytics but never abandoned the good old eye test. Retrieved from https://www.washingtonpost.com/sports/wizards/79-year-old-nba-scout-has-embraced-analytics-but-never-abandoned-the-good-old-eye-test/2017/05/17/bc3aae30-250d-11e7-b503-9d616bd5a305_story.html?noredirect=on&utm_term=.9b15e4c0fcab
- Swaab, R. I., Schaerer, M., Anicich, E. M., Ronay, R., & Galinsky, A. D. (2014). The too-much-talent effect: Team interdependence determines when more talent is too much or not enough. *Psychological Science*, 25(8), 1581-1591.
doi:10.1177/0956797614537280
- Top moments: Kobe Bryant drops 81 points on Raptors in '06. (n.d.). Retrieved from <http://www.nba.com/history/top-moments/2006-kobe-bryant-81-points>
- Tuck, G. N., & Whitten, A. R. (2013). Lead us not into tanktation: A simulation modelling approach to gain insights into incentives for sporting teams to tank. *PLOS One*, 8(11). <http://dx.doi.org/10.1371/journal.pone.0080798>
- Weinberg, D. H. (2013). Talent recruitment and firm performance: The business of major league sports. *SSRN Electronic Journal*. doi:10.2139/ssrn.2373559
- Whitler, K. A. (2018, July 16). 3 reasons why storytelling should be a priority for marketers. Retrieved November 15, 2018, from <https://www.forbes.com/sites/kimberlywhitler/2018/07/14/3-reasons-why-storytelling-should-be-a-priority-for-marketers/#5453f14a6758>

Wilt Scores 100! (n.d.). Retrieved from

http://www.nba.com/history/wilt100_moments.html

Withers, T. (2016, June 20). LeBron, Cavaliers bring trophy home to Cleveland.

Retrieved from <http://www.nba.com/2016/news/06/20/cavs-return-home-as-champs.ap/?ls=iref:nba:specials>

Yang, Y., & Shi, M. (2011). Rise and fall of stars: Investigating the evolution of star status in professional team sports. *SSRN Electronic Journal*.

doi:10.2139/ssrn.1843508