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Relationship of Selected Pre–NBA Career Variables to NBA Players' Career Longevity

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Abstract

Given the change in the business nature of the National Basketball Association (NBA), the player evaluation process has become increasingly important. The methods discussed in this article can aid general managers and owners in the player acquisition process by providing a means of evaluating talent. The purpose of the study was to identify the relationship between pre-NBA career statistical variables and career longevity, measured as the number of seasons in the NBA. Data from the 1988-2002 collegiate basketball seasons were analyzed. Participants consisted of 329 NBA guards, forwards, and centers who entered the NBA in 1988 and ended their careers during or before the 2002 NBA season. The study included 11 independent variables: points, rebounds, assists, steals, blocks, fouls, turnovers, minutes played, free throw percentage, field goal percentage, and 3 point percentage. There was a single dependent variable, career longevity. Data analysis comprised multiple regression tests to determine the relationship between the independent variables and the dependent variable. The multiple regression tests revealed a relationship between pre-career statistical variables and career longevity for guards and forwards. However, no such relationship was found for centers.

Introduction

The National Basketball Association (NBA) is a multimillion-dollar professional sport business. The value of team franchises has grown dramatically since David Stern became NBA commissioner in 1984. That season, the average team value was around \$15 million (Smith, 2003). The figure had risen to around \$300 million by 2003 (Smith, 2003). The increased revenues in the game have led to higher player salaries, which mean more pressure on individual players to perform. The business nature of basketball has put a premium on the selection of players and on the process—an imprecise science—that goes into selection. Owners and general managers are desiring to operate their teams according to corporate models, by controlling escalating player salaries

(Sandoval, 2003). Front-office executives want to reduce the risk of bad draft picks and overpaid free agents (Sandoval, 2003).

Given the financial structure and business nature of the game, how do general managers and owners measure and evaluate a player's potential for success? Additionally, how do they make personnel decisions in a league in which the stakes are so high that one bad decision can make for disaster in the form of millions of dollars lost? One important aspect of building a championship NBA team is how the general manager constructs the team roster. It is expected that the general manager will attempt to acquire the most talented players when building a team (Staw & Hoang, 1995). How to accomplish this is the problem that owners and general managers continually face. Berri (1999) stated that, "[W]ithout an answer, one is unable to ascertain who should play, what free agents should be pursued, or what trades should be consummated" (p. 411).

In the current era of professional basketball, with the average player salary reaching over \$5 million, owners want to operate their businesses more efficiently by controlling costs and risks (Sandoval, 2003). The goal is to reduce the number of bad draft picks and avoid signing the least productive players (Sandoval, 2003).

The evaluation of potential playing talent is a difficult task (Berri & Brook, 1999). In professional basketball, using selected statistical variables to measure a player's prospective success is considered an important part of the player evaluation process (Berri & Brook, 1999). Assembling players who produce at statistically high levels may ultimately improve a team. Berri (1999) identified a link between player statistics and team wins. The NBA draft is one of the primary methods by which teams acquire talent. Staw & Hoang (1995) found that the order in which players were drafted correlated with their playing time and the length of their careers.

The NBA draft's importance becomes even clearer when one considers how the draft inevitably represents a set of lost opportunities (Staw & Hoang, 1995). In selecting any one particular player, a team may be passing over the next all-star or superstar player (Staw & Hoang, 1995). The NBA draft is thus very risky (Amico, 2001). History has shown that the projection of player development is not a precise science, and that teams may be in need of effective evaluative methods when scouting talent (Amico, 2001). The risks of the draft were made widely known by the Portland Trail Blazers when, in 1984, that team anticipated greater benefits from signing Sam Bowie than from signing Michael Jordan. And in the same draft, Dallas selected Sam Perkins and Terrance Stansbury instead of Auburn University's Charles Barkley and Gonzaga University's John Stockton (Staw & Hoang, 1995). Selection of the right players through the NBA draft is important (Staw & Hoang, 1995).

The NBA draft used to require relatively little work or resources (Shouler, Ryan, Koppett, & Bellotti, 2004). Teams

had small scouting staffs to evaluate college players, yet by the time the draft came around, every team knew who the best players were and which ones they wanted to draft (Shouler et al., 2004). As basketball became more of a business, general managers, owners, and team presidents had to change their approach. Even as the process changed, however, the goal stayed the same (Popper, 2004). It is to improve the team through selection of the best, most valuable player available at the time a team is making a selection (Popper, 2004).

Each NBA team has a player personnel staff that spends most of its time searching out less obvious candidates for the draft (Wolff, 2001). These scouts identify prospective players by attending games, analyzing game films, or both. When NBA scouts observe players in person, they typically use subjective evaluation based on detailed information they gain in eight areas of basketball: physical characteristics, mental characteristics, ball skills, offense, rebounding, defense, knowledge, strengths, and weaknesses (Wolff, 2001).

Currently, there is no known research that looks to pre-career statistical data to determine longevity of NBA play (although, again, NBA experts view potential career longevity as an important factor characterizing NBA draft prospects, according to Amico, 2001). Those studies that are available did not examine relationships between predictor variables and career longevity. According to Oliver (2005), the value of individual NBA players can be assessed using traditional statistical categories. Previous studies looked at the statistics for NBA players recorded during their play in the league; they sought to identify alternative methods of evaluating talent (Ballard, 2005). The success of the NBA players was measured using the traditional statistical categories (points, rebounds, field goals attempted, field goals made, etc.) (Ballard, 2005). Thus while most of these studies obtained traditional player statistics, they did not go on to look for relationships between those statistics and the players' career longevity (i.e., number of seasons in the NBA). Some research, however, indicates that there is a positive relationship between traditional player statistics and the length of NBA players' careers (Staw & Hoang, 1995).

Major League Baseball was the first league to experiment with statistical predictor models. Specifically, the Oakland Athletics' general manager began to evaluate talent primarily by looking at player statistics, and he both drafted players and acquired free agents based on this nontraditional method (Lewis, 2003). This method of evaluation became known as the money ball theory, reflecting its capacity to identify productive players available at below-market value, whom traditional scouting methods would not view as commodities (Lewis, 2003). Money ball theory has proved a success for the Oakland Athletics and for another team that uses statistical methods to evaluate talent: the Boston Red Sox.

The reasoning underlying the use of player statistics in professional baseball is rooted in the idea that college players generate meaningful statistics (Lewis, 2003). College players play more games than high school players, and the level of competition is enhanced at the collegiate level as opposed to the high school level (Lewis, 2003). Collegiate statistics, then, reflect a sample size large enough to accurately picture the underlying reality (Lewis, 2003). Projecting the ongoing success of college players is thus easier than making such projections for high school players (Lewis, 2003).

The statistics that can be garnered from college play enable baseball executives and scouts to see past all kinds of visual scouting prejudices (Lewis, 2003). Indeed, it has been argued that what is most important about a baseball player is not the player's character but the picture drawn by his statistics (Lewis, 2003). The belief of experts who employ predictor statistics in baseball is that a player "is" what he has already done, not what he looks like or might become (Lewis, 2003). It is a belief that runs counter to the thinking of the traditional baseball scout, to whom what matters is what the scout can envision the player doing (Lewis, 2003).

The concept of statistical analysis of talent in baseball was brought to bear on efforts to make the development of players more efficient. As Lewis (2003) stated, the statistics used to evaluate baseball players were probably far more accurate than anything used to measure the value of people who didn't play baseball for a living. Adding a statistical model to traditional scouting and player evaluation methods can better inform owners and general managers about talent, permitting them to identify skill sets related to career longevity. In basketball, too, better gauging of players' potential success may lead to a more efficient process of putting together an NBA team roster.

Method

The purpose of the study was to identify the relationship between selected pre-NBA career statistical variables and NBA players' career longevity (measured as the number of seasons in the NBA). Specifically, the following two questions were addressed:

- 1. Can 1 or more of the 11 traditional player statistics, recorded during the year preceding entry into the NBA, predict the career longevity of NBA guards, NBA forwards, and NBA centers?
- 2. Can 1 or more of the 11 traditional player statistics, recorded during the 2 years preceding entry into the NBA, predict the career longevity of NBA guards, NBA forwards, and NBA centers?

The study questions were built around 1-year and 2-year collegiate statistics on the assumption that performance during these specific periods is the best indicator of NBA potential. This is assumed because, statistically speaking, it is during these periods that college players who subsequently entered the NBA played their best collegiate seasons.

For this study, the researcher measured collegiate statistics for the following 11 areas of basketball: points, rebounds, assists, steals, blocks, field goal percentage, free throw percentage, fouls, 3 point percentage, minutes played, and turnovers. In 9 areas, the totals were used; for field goal percentage, free throw percentage, and 3 point percentage, however, raw percentages were used rather than totals, since percentages provide better analysis of shooting accuracy. The study evaluated minutes played rather than games played, because use of the two is linearly correlated; added together, both supply no better information than is obtained by evaluating only minutes played. The decision to use these particular statistics in this study was informed by the history, within professional basketball, of the use of the statistics. Dating back to the 1949 merger of the Basketball Association of America and National Basketball League that formed the NBA, this set of player statistics has been the primary method of analyzing the game (Lahman, 2004).

The particular statistics chosen for the present study's multiple regressions were based on the history of players' statistical production at the position of guard, of forward, and of center. Historical statistical production by guards, forwards, and centers in the 11 basketball activities thus provided the basis for the present analysis. Over the history of basketball, the players occupying the three positions produced proficiently in those statistical areas which the present study has associated with each position, as follows: (a) guards—field goal percentage, 3 point percentage, free throw percentage, assists, steals, turnovers, points, personal fouls, and minutes played; (b) forwardsrebounds, 3 point percentage, points, free throw percentage, steals, blocks, field goal percentage, turnovers, personal fouls, assists, and minutes played; and (c) centers—rebounds, free throw percentage, field goal percentage, blocks, personal fouls, turnovers, points, and minutes played.

The statistics themselves were obtained from an unofficial professional and collegiate basketball website, Database Basketball (located http://www.databasebasketball.com). Database Basketball is a primary Internet resource for gathering players' statistical data at both levels. It houses information on all college players who played in the NBA and on those who were NBA draft picks. The website also provided for the study the total number of players playing in the NBA from 1987-88 to 2001-02. The study employed the collegiate statistics from the year immediately preceding a study participant's entry into the NBA.

Participants

The present study included 220 players who entered

the NBA during or after the 1987-88 and ended their playing careers with the 2001–02 season or earlier; the study excluded players who entered the NBA directly from high school, directly from junior college, or from an overseas league. The sample was furthermore limited to NBA athletes who had played at NCAA member institutions for at least two seasons. The time frame 1987–88 to 2001–02 was deemed recent enough to be relevant to the present; it also included enough time to obtain a representative number of players for study. Beyond the specified time frame and the exclusion of players lacking an NCAA collegiate record or transferring from overseas leagues, study participants had to have played in at least one NBA game. Those players who entered in the 1987–1988 season were the most relevant sample, because of changes marked that season in both the NBA style of play and its draft structure. The latter change led NBA general managers to try new and different draft strategies than in years past.

Design and Analysis

The data were analyzed using SPSS (Version 12.0). A multiple linear regression analysis was conducted involving the dependent variable, career longevity, and 2 or more of the 11 criterion variables. Multiple regression analysis was used in order to find the variable or combination of variables yielding the most accurate prediction of NBA career longevity (Thomas & Nelson, 2001). Multiple regression analysis made it possible to combine the variables from collegiate statistics to produce optimal assessment of their relationship with the independent variable, NBA career longevity (Allison, 1999). Alpha level for the analyses was set at p < 0.05.

Six multiple regressions were conducted to assess the relationship between pre-NBA career statistical variables and NBA career longevity. Each of the regressions conducted was based on player position, with guard, forward, and center positions being analyzed. In three regressions (one per position), the 2-year collegiate statistics (statistics for the two college seasons immediately prior to the player's entering the NBA) constituted the independent variables; in the remaining three regressions (one per position), the 1-year collegiate statistics (statistics for the college season immediately preceding NBA entry) constituted the independent variables. Career longevity (i.e., number of seasons in the NBA) was the outcome variable in all of the regression analyses.

Results

Of the 329 NBA players included in this study, 133 were listed as guards, 142 were forwards, and 54 were centers. The average length of their NBA careers was

01 20020112 (DD - 2.08).

1-Year Statistics

A significant (p < .05) overall regression was found for guards during analysis of the 1-year statistics (F = 3.218), with an R of .437. The individual statistics measuring assists, turnovers, and points had significant beta scores (Table 1).

Table 1

Summary of Regression Analysis for one-year statistics for guards prior to entry into the NBA.

| Variable | В | SE B | β |
|------------|-----------------|---------|------------|
| (Constant) | 4.106 | 4.266 | |
| FGP | 703 | .935 | .063 |
| TPP | 1.188 | .018 | .195 |
| FTHP | -6.033 | 5.113 | - 1.180 |
| ASST | 0.02151* | .008 | .362 |
| STEAL | 0.02025 | .017 | .124 |
| TURN | -0.03933* | .019 | 237 |
| POINT | 0.009410* | 003 | 386 |
| PF | -0.01436 | .020 | 065 |
| MIN | - o.oooo6548 | .000 | 015 |

*p <.05

A significant (p < .05) overall regression was also found for the NBA forwards during analysis of the 1-year statistics (F = 2.531), with an R of .449. Field goal percentage, free throw percentage, and assists had significant beta scores within the equation (Table 2). For the 1-year totals for the center position, neither overall significance nor significant beta scores were found.

Table 2

Summary of Regression Analysis for one-year statistics for forwards prior to entry into the NBA.

| Variable | В | SE B | β |
|------------|----------|-------|------|
| (Constant) | -12.424 | 4.971 | |
| REB | 0.006540 | .006 | .130 |

| TPP | 1.954 | 1.347 | .136 |
|-------|------------|-------|-------|
| POINT | -0.0004532 | .001 | 069 |
| FTHP | 7.629* | 4.227 | .169 |
| STEAL | 0.03883 | .025 | .174 |
| BLOCK | 0.006794 | .013 | .050 |
| FGP | 20.291* | 6.800 | .300 |
| TURN | -0.01215 | .020 | 073 |
| PF | -0.006445 | .021 | -0.33 |
| ASST | 0.03073* | .014 | .270 |
| MIN | -0.002766 | .002 | 143 |

^{*}p <.05.

2-Year Statistics

In the three multiple regressions run using the 2-year statistics (combined totals), a significant (p < .05) overall regression was found for guards (F = 3.706), with an R of .462. Assists, steals, turnovers, and points generated significant scores during the analysis (Table 3).

Table 3 Summary of Regression Analysis for two-year statistics for guards prior to entry into the NBA.

Coefficients Table

| Variable | В | SE B | β |
|------------|-----------|-------|------|
| (Constant) | -3.726 | 5.379 | |
| FGP | 10.914 | 6.844 | .140 |
| TPP | 1.954 | 1.347 | .136 |
| FTHP | -4.098 | 5.764 | 070 |
| ASST | 0.01140* | .005 | .340 |
| STEAL | 0.01725* | .010 | .193 |
| TURN | -0.02513* | .012 | 255 |
| POINT | 0.004940* | .002 | .351 |
| PF | 0.001047 | .011 | .009 |
| MIN | 0.0001264 | .000 | .031 |
| | | | |

^{*}p <.05.

Though no significant overall regression was found for the NBA forwards, out of all the independent variables, field goal percentage, free throw percentage, and assists showed a significant relationship with career longevity (Table 4).

Table 4
Summary of Regression Analysis for two-year statistics for forwards prior to entry into the NBA.

Coefficients Table

| Variable | В | SE B | β |
|------------|------------|-------|------|
| (Constant) | 1.216 | 2.703 | |
| REB | 0.007322* | .004 | .257 |
| TPP | 1.954 | 1.347 | .136 |
| POINT | -0.0002758 | .001 | 045 |
| FTHP | -0.03481 | .109 | 028 |
| STEAL | 0.002473* | 014 | .020 |
| BLOCK | 0.003627 | .008 | .044 |
| FGP | ·795 | 2.140 | .033 |
| TURN | -0.01922 | .012 | 196 |
| PF | -0.002314 | .012 | 020 |
| ASST | 21.13 | .008 | .346 |
| MIN | -0.001758 | .002 | 015 |
| | | | |

^{*}p <.05.

The statistical analysis of players at center position produced neither a significant overall regression score nor significant beta scores for the 2-year data. Discussion

The purpose of this study was to identify the relationship between selected pre-NBA career statistical variables and the career longevity of players, measured as number of seasons in the NBA. The overall regression employing guards' 1-year statistics revealed an R score of .437. The R² was .191, meaning 19.1% of the variation in career longevity is explained by the differences in points, assists, and turnovers. Among forwards, the overall regression score was .449, with an R² of .202, meaning 20.2% of the variation in career longevity is explained by the differences in field goal percentage, free throw percentage, and assists.

First Research Question Guards

With respect to the first research question, the study found that, statistically, assists, points, and turnovers were significantly related to guards' longevity in the NBA Similarly, field goal percentage, free throw percentage, and assists were found to be significantly related to forwards' longevity in the NBA. These results tend to support the evaluation process currently used by NBA teams to select guards and forwards. Guards are players who control the tempo of the game, protect the basketball, and run a team's offense. At the guard position, then, assists and turnovers are important factors, as the regression demonstrated. Scoring (i.e., points) was also shown to be important with former college guards going on to long careers in the NBA. Turnovers, too, are important at the guard position, because guards control the basketball on offense. Each turnover indicates lack of continuity during a game that can largely be attributed to those team members who control the basketball (Zak, Huang, & Sigfried, 1979). The data demonstrate that every possession is important in basketball, and guards are in control of the ball. Moreover, the significance of assists, also established by the data, can be attributed to the fact that, in running the offense, guards create scoring opportunities for teammates. Assists highlight aspects of ball handling and teamwork, as well as a positive contribution to output (Zak et al., 1979). Turnovers and assists were expected to be significant indicators of career longevity among guards; points were an additional statistical category that proved significant, for the reason that, on most NBA teams, shooting guards are called upon to be point scorers.

Forwards

For players at the position of forward, those basketball activities measured in the field goal percentage, free throw percentage, and number of assists proved statistically significant during the present study's regression analyses. Such findings no doubt reflect the fact that some forwards, called power forwards, play with their backs to the basket, while others, known as small forwards, play more like guards. As demonstrated by the statistically significant data obtained here for field goal percentage, free throw percentage, and assists, basketball forwards must be very versatile players. They must shoot well, play aggressively enough to reach the free throw line thus placing the opponent in "foul trouble," and pass just as effectively as guards in order to involve teammates in play. Forwards clearly, from a statistical standpoint, play an integral role in NBA contests.

High field goal percentages and free throw percentages are an important contribution to team output and have impact on the game (Zak et al., 1979). With other factors held equal, the better a team shoots the ball, the larger its output; field goal percentage suggests how efficiently a team shoots (Zak et al., 1979). The study data thus suggest a need for NBA forwards to be very efficient and accurate players. They are asked to do many things on the basketball court, at different times. In terms of their skill at assists, small forwards must be very versatile and must share some of the same skill sets as guards, becoming play makers on occasion. Assists—highlighting as they do aspects of ball handling and teamwork (Zak et al., 1979)—thus constitute a

significant indicator of NBA career longevity.

Centers

Unlike the data for forwards and guards, the data for centers in the present study produced no significant results. This may be attributable to the number of subjects in the study. The number of centers playing in the NBA has decreased over the years, a fact reflected in the minimal number of centers in this study (N = 54). Both the guards and the forwards studied here numbered about twice the center subsample.

Second Research Question

Guards

With respect to the second research question, the findings of analyses of the 2-year data show NBA career longevity to be predicted by certain basketball activities to a statistically significant degree. A significant regression equation was found ($R = .462, R^2$ of .213) for players at the guard position: 21.3% of the variation in NBA career longevity among guards is explained by the differences in points, assists, turnovers, and steals. In analyzing steals recorded by guards, adding an additional year of collegiate statistics produced a significant result. A measure of a player's defensive ability, steals represent a change in possession (Berri & Brook, 1999). Because guards play the passing lanes on defense and apply defensive pressure on the perimeter, this statistic should be significant among guards.

Forwards

For the 2-year data on the NBA forwards, the overall regression model did not prove significant; however, two variables, assists and rebounds, did prove significant. It is of special interest that the rebound statistic achieved significance with the 2-year totals but not with the 1-year data. Rebounding is important to scouts, because its impact is seen in each game, as well as on the individual player (Zak et al., 1979). When a team outperforms an opponent in terms of rebounding, its chance of victory increases (Zak et al., 1979). Each rebound a team obtains represents a gain of possession; defensive rebounding indicates how frequently an opponent fails to convert a possession (Berri & Brook, 1999). Assists, as has been discussed in terms of the first research question, highlight aspects of both ball handling and teamwork and make a positive contribution to output (Zak et al., 1979).

Centers

In the analysis of 2-year data from the position of center, no statistics reached the level of significance, nor was the overall regression model significant. As in the case of the first research question, this finding can be attributed to the size of the sample of NBA centers.

Position-Based Differences

It is believed that the three positions (guard, forward,

center) generated very different analytical results because they serve very different purposes in the game. At the guard position, assists, steals, turnovers, and points were significant indicators of NBA career longevity, because the guard position most lends itself to the keeping of such statistics. Guards are quick, agile, versatile, athletic players with extremely high basketball IQs. In terms of statistics-keeping, they find themselves involved in many aspects of a basketball game. The nature of the position requires guards to be proficient in a number of categories, and their proficiency is easily witnessed by scouts, coaches, commentators, and fans. Guards' impact on the game is readily quantified and measured by statistics.

The present study suggests that for forwards, in contrast, it would be difficult to predict NBA longevity. using collegiate statistics. The position of forward is probably the most difficult from which to retrieve statistical data. For instance, in the NBA forwards are asked to play dual roles, with the position broken down into the small forward and the power forward. The small forward must be a fundamentally sound offensive and defensive player possessing some of the same skills that point guards and shooting guards possess. Small forwards must be able to pass the basketball, enabling teammates to score, as well as be able to score points themselves. Power forwards, on the other hand, are asked to play more like centers: They are the muscle of the team, playing strong inside, rebounding, and providing defense, though not relying on extreme quickness and athletic ability. While the results for forwards in this study are very difficult to assess, the results are understandable from a basketball standpoint.

Relative to guards and forwards, centers' performance is less easily measured with statistics. The reason is that the tasks falling to centers are frequently among the intangibles of the game. At center, the player who can demand the attention of the opposing defense possesses a relatively great capacity to set up his teammates. This cannot always be measured with statistics, since the center can set up another player without having the basketball. In addition, centers who can face the opponent's defense and play with their backs to the basket create numerous problems for the defense that cannot be measured statistically. Centers are usually proficient at blocked shots, rebounds, points, and field goal percentage. Good centers also drive a defense to "play honest," preventing teams from overextending on the perimeter and forcing double teams. Furthermore, successful centers are physical and maintain good position while boxing out. Neither of these things can be measured with statistics, but both are essential to a team's success. The intimidation factor of a 7-ft player may not show up in box scores either, but being able to tap that factor to alter opponents' shots (if they cannot be blocked) is very important to success at the center

position.

Between 1983 and 1987 a number of elite centers moved from the college ranks to the NBA, including Ralph Sampson, Hakeem Olajuwon, Patrick Ewing, Brad Daugherty, and David Robinson (Luft, 2001). These centers were drafted by the NBA in the 1980s. Since that decade, however, the only centers drafted during the top pick were Shaquille O'Neal, Michael Olowokandi, Yao Ming, and, most recently, Greg Oden (Luft, 2001). There appear to be far fewer true centers in the NBA lately, leading to statistics' inability, in this study, to measure performance at the center position. The lack of traditional centers may be a result of the increasingly superior quality of basketball athletes. As they become quicker, more versatile, more athletic generally, those who might have become centers can instead play power forward. The center position is thus left to a small group of players who are relatively nonproductive, statistically speaking, and thus cannot be measured in the same way as forwards and guards (Luft, 2001).

Implications for General Managers

While the results of this study suggest that collegiate statistics offer little predictive power in terms of centers' NBA career longevity, they also show that some statistical categories used by the NBA are predictors of the longevity of players at the guard and forward positions. The implication of the data analysis is thus that statistics, when used to augment scouts' customary analysis of videotapes, should yield a sound assessment of a prospective player's potential. Scouts typically prefer to observe an athlete in person to get a better feel for the athlete's game and to note physical aspects of the athlete that may not appear on tape or in statistics. However, because it is a fact that players can go hot or cold on any given night, scouts should also acknowledge the extreme importance of statistical analysis. Statistics in basketball offers a powerful tool for avoiding bad player selections, although it is important always to remember that statistical analysis is one tool, not the ultimate word on player quality.

By gathering as much statistical information about a player as possible, a scout or general manager can make an informed decision supported by numbers, not reliant solely on emotion or other subjective criteria. Statistics may, furthermore, make it possible to identify undervalued skill sets offered by players at certain positions. In short, statistical analysis has a place in player evaluation strategies aimed at efficient use of draft choices and money.

Conclusions and Recommendations

A review of the literature shows the basketball scouting and player evaluation process leading to the NBA draft to be a difficult process and one that could benefit from more information in the form of statistical analysis. The data in the present study demonstrate that there is a relationship between collegiate play described statistically and career longevity in the NBA, as follows:

- Assists, turnovers, and points recorded by guards over the year of college basketball play immediately preceding entrance into the NBA are related to NBA career longevity.
- Assists, steals, turnovers, and points recorded by guards over 2 years of college basketball play immediately preceding entrance into the NBA are related to NBA career longevity.
- o Field goal percentage, free throw percentage, and assists recorded by forwards over the year of college basketball play immediately preceding entrance into the NBA are related to career longevity in the NBA.
- Assists and rebounds recorded by forwards over 2 years of college basketball play immediately preceding entrance into the NBA are related to career longevity in the NBA.
- o The results of this study show a relationship between basketball's statistics categories and NBA career longevity, but more work is needed to fully understand the predictive mechanism and provide general managers with more precise information. In addition, future studies should seek out data for the years prior to 1987-88 and following 2001-02, to begin to track historical trends in the relationship.

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