# Coaching Online in Basketball 

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#### Abstract

The sports fans like to talk about sports before the games during the games and after the games. Mostly the sports fans talk about the starting fives, in-game substitutions and the critics of the game performances and the game results. The fantasy sports give the opportunity to people to create and manage their roster. Fantasy sports games point coming from real game data. The fantasy game players have to select the players that can reach the best statistics of their actual games. In this study, the 2017-2018 Euroleague Fantasy Challenge Game's most selected 80 players performance index ratings from the Euroleague data are examined. For the statistical analysis, the IBM Spss Statistics 25 programme is used. The results show that 14 players in the PG-SG position were ranked first with an average of 14.36 performance index rating. Twenty players who played in the center position took the second place with 12.53 performance index rating while the 11 players who played in the PF position took the third place with 12.26 performance index rating.


Keywords: fantasy basketball, sports, fantasy sports

## Introduction

Fantasy sports games include both real and virtual life．The sports enthusiasts and fans can watch matches played in stadiums，in halls or on the television screen in real time．
Sports performance is highly complex and capable of generating vast quantities of data．This is the case for all sports，especially team games（O＇Donoghue，2015）．Statistics on fantasy games are valuable，and statistics show the performances shown in real games．Fantasy games are not real，but player performances are coming from real games．The score of each sport and each fantasy game also varies according to the characteristics of the sport．

Fantasy sports described by Ruihley and Hardin＂an interactive team management activity based on statistics accrued by athletes of real－life professional sports organizations and／or college athletics＂（Billings and Ruihley，2014）．In fantasy games，the player who collects the most points at the end of each fantasy game is the champion of the week，champion of the month and champion of the season．Organizations award various prizes for the champions and winning teams．Fantasy games are a tool that people keep in touch with sports．
In parallel with the development of sports technology，it has spread to a wide audience and within this sector；Along with globalization，along with the process of professionalization，it transformed sporting activities from being a game to an economic functioning area．In this transformation，clubs evolved into one business，and fans and viewers evolved into a consumer（Samur，2018）．Today，fantasy games have become an industry where sports fans are showing great interest．Fantasy games played on the Internet can be played from any where in the world．The games that can be played for many sports on the internet based on real－time performances．The scores from the part of the games which reflect the performance of the players during the match through the statistics are reflected in these games．Despite the global growth of fantasy sports，there is a lack of available scientific research relating to fantasy basketball parameters．
Identification of players performance efficiency，there a lot of formulas been around．
Martínez，（2010），reviewed the basketball player rating systems of official competitions and fantasy leagues．In his study，some leagues use the same valuation systems for their fantasy games and some of use different valuation systems excluding the club competitions．
Muthu Alagappan（2012），at MIT Sloan Sports Analytics Conference，revealed that according to his analysis，NBA players could largely be grouped into 13 types（M．Shea and E．B aker．，

2013）．These 13 positions；Offensive Ball－Handler，Defensive Ball－Handler，Combo BallHandler，Shooting Ball－Handler，Role－Play ing Ball Handler，3－Point Rebounder，Scoring Rebounder，Paint Protector，Scoring Paint Protector，Role Player，NBA 1st－Team，NBA 2ndTeam，One－of－a－Kind．For his TEDx Spokane talk（2013），he reduced that number to ten．

These ten positions are Inside Outside Scorers，Mid－range Big man，two－way All－Stars， Defensive Ball－handlers，Jump Shooting B all－handlers，Scoring Rebounders，Paint Protectors， 3－Point Ball－handlers，3－Point Specialists，Low－usage Ball－handlers．
The purpose of this study is to clarify the performance index rating of Euroleague players according to their player positions．Investigation of the performance index rating categorized by F8 \＆last eight teams，home \＆away teams，winning \＆losing teams．

## Materials and Methods

In this study，the most selected 80 players and played at least 15 games and 15 minutes from the 16 teams in the Euroleague fantasy challenge game．The player statistics that make up the performance index ratings have looked on the official Euroleague website （www．euroleague．net），according to player positions．The study included nine different groupings according to player positions；pg，pg－sg，sg－sf，sf，sf－pf，pf，pf－c，c．The in－situ statistics，which constitute performance index ratings，from the players who played in which positions have searched．

## Statistical analysis

SPSS package（v．25）used for the statistical analyses of the current data．All the data expressed as means．Totally 80 players discriminated into nine groups according to their play er positions．Finally，cluster analysis for data used to examine the differences between the performance index rating according to player positions．

## Fantasy Sports Games

A fantasy sports contest application may allow users to Setup unique user accounts，in which user Specific information Such as，for example，identification information，fantasy Sports contest participation information，user preference information，or any other Suitable information associated with the user，may be stored．The application may personalize fantasy Sports contest information and displays for the user．（Barber and Hughes，2006）

Conventionally，the rules in a fantasy sports contest are set by a fantasy sports contest system provider or are set by a league commissioner who sets the rules under which a group of fantasy or rotisserie sports game users competes against each other．For example，for every goal scored in real－life by a member of the user＇s fantasy Soccer team，a conventional fantasy sports contest system might award five points to the user in the fantasy competition（Junkin and Barber，2012）．

The Euroleague Fantasy Challenge Game has been played in the same format for a long time until last season．In old format，the online coaches have to select ten players for their fantasy team squads：two point guards，four shooting guards or small forwards and four power forwards or centers．There are players on the bench if any player doesn＇t play in the actual game or can＇t participate in the game of any reason．The reasons would be coach decision， health problems or personal issues．

In the new format，there are eight players in the main squad to get fantasy points，and three players are on the bench if any player don＇t get any minutes or can＇t participate to the game the fantasy game replaced a bench player automatically for these players．Another new rule in the game is，captain player will get doubled of his actual points．There is also a vice－ captain if the Captain player does not take any minutes in the game and Vice－Captain＇s Score will be doubled if the Captain does not play．The fantasy coaches have to select their Captains very carefully because the new Captain rule will affect the game forever．There are no rule changes for the winning team＇s players get a $\% 10$ bonus of their actual game points and losers team＇s players to stay with their same actual game points．The Coaches allocated a maximum of three valid Trades per week rule stays the same for the new format．

## EuroLeague Fantasy Challenge scoring system：

Total Fantasy Points $=($ PTS + ASS + REB + BLK + STL + FLD + FT1M + FG2M + FG3M －TO－BLKA－FOULS－FT1A－FG2A－FG3A）＇（＋10\％bonus if his EuroLeague team wins）．

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The descriptions of player index rating variables shown in Table 1.

## Abbreviations

PTS Point, ASS Assist, REB Rebound, BLK Block, STL Steal, FLD Fouls drawn, FT1M Free throw made, FG2M Two-point field goal, FG3M Three-point field goal, TO Turnover, BLKA Block, CM Fouls committed, FT1A Free throw attempted, FG2A Two point attempted, FG3A Three-point attempted.

Table 1. Player Index Rating

| Ab. | Descriptions | + , - |
| :--- | :--- | :---: |
| PTS | Points are scored when a player puts the ball through the basket. | + |
| ASS | An assist is a pass that leads directly to a made basket for a teammate. | + |
| REB | Gather in and gain control of a missed shot; a missed shot that is <br> retrieved. | + |
| BLK | A block occurs when a defensive player deflects a shot attempt of an <br> offensive player resulting in a missed shot. | + |
| STL | A steal occurs when a defensive player forces an offensive player toturn <br> the ball over. | + |
| FLD | It is a violation of the rules regarding unlawful contact and/or <br> unsportsmanlike behavior. | + |
| FT1M | A shot was taken from the free throw line. | + |
| FG2M | A shot that goes through the basket from above. | + |
| FG3 M | A shot that goes through the basket from above. Field goals from 3 point <br> line. | + |
| TO | A player is charged with a turnover if the team lose possession of the <br> ball to the opposing team before a shot is attempted. | - |
| BLKA | A block occurs when a defensive player deflects a shot attempt of an <br> offensive player. | - |
| CM | A personal foul is any violation of the rules of the game that involves <br> personal contact with an opposing player. | - |
| FT1A | A shot that goes outside ofthe rim behind the freethrow line. | - |
| FG2A | A shot that goes outside ofthe rim inside the three-point line. | - |
| FG3A | A shot that goes outside ofthe rim behind the three-point line. | - |

NOTES: Ab: Abbreviations, +: Plus, -: Minus
Source: https://ir.nba.com/category/other/dictionary/

## Designated Player Positions

Some players have been listed in two different positions due to their versatility，which makes the players more valuable in the game，as the players can be located in several spots of EuroLeague Fantasy Challenge team．For instance，a player listed as Shooting Guard and Small Forward can be used in four different spots in EuroLeague Fantasy Challenge line－up： Shooting Guard，Guard，Small Forward，and Forward．There are nine positions in the game． The designated player positions descriptions are shown in Table 2.

Source：https：／／fantasych allenge．eu roleague．net／\＃help／game－guidelines


Figure 1．TOP 80 PLAYERS
Source：https：／／fantasych allenge．eu roleagu e．net／\＃stats－centre

Table 2. Player Positions

| The Player Positions | Descriptions |
| :--- | :--- |
| The Point Guard (PG) | The point guard runs the offense and watches the backcourt. <br> His role is so important to the team that he is an extension of <br> the coach on the floor. |
| The Shooting Guard (SG) | The shooting guard is also referred to as the No. 2 guard, or <br> off-guard. He is generally the better shooter of the two <br> guards. |
| The Small Forward (SF) | The small forward is generally the most gifted player on the <br> team. He should be a good scorer able to score from the <br> wings, around the key, and under the boards. |
| The Power Forward (PF) | The power, or strong, forward does not receive much <br> recognition; usually, he is known as the player doing the <br> "dirty work" and is often taken for granted. |
| The Center (C) The center, along with the point guard, is easily the most <br> important player on the team, he is the tallest player on the <br> floor. <br> The Point Guard <br> (PG) \& The Shooting <br> Guard (SG) Can play both two positions PG \& SG <br> The Shooting Guard <br> (SG) \& The Small <br> Forward (SF) Can play both two positions SG \& SF <br> The Small Forward <br> (SF) \& The Power <br> Forward (PF) Can play both two positions SF \& PF <br> The Power Forward <br> (PF) \& The Center <br> (C) Can play both two positions PF \& C |  |

Source: https://www.usab.com/youth/news/2012/08/defining-the-positions.aspx

Table 3．The Most Selected 80 Players with Playing Positions


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NOTES：PG：Point Guard，PG／SG：Point Guard，Shooting guard，SG：Shooting guard，SG／SF：Shooting guard， Small Forward，SF：Small Forward，SF／PF：Small Forward，Power Forward，PF：Power Forward，PF：Power Forward，PF／C：Power Forward，Center

The most selected 80 play ers with play ing positions list shown in Table 3.

Processes of Play：From The First Day to Last Day


Figure 2．A Euroleague basketball fantasy team owner＇s roster
A sample of the Euroleague basketball fantasy team roster has shown in Figure 2.

Table 4．The Selection of Euroleague Fantasy Challenge Positions

| Position | Descriptions |
| :--- | :--- |
| Point guard | Must be selected from PG position |
| Shooting guard | Must be selected from PG／SG，SG，SG／SF， <br> position |
| Small forward | Must be selected from SG／SF，SF，SF／PF |
| Power forward | Must be selected from SF／PF，PF，PF／C |
| Center | Must be selected from PF／C，C |
| Guard | Must be selected from PG，PG／SG，SG， <br> SG／SF |
| Forward | Must be selected from SG／SF，SF，SF／PF，PF， |
| Utility | Can select from every position |

In Euroleague fantasy challenge game there are eight positions for selection as shown in Table 4.

## Team Selection

－Must select a total of 12 Players before the commencement of Round One．If，register once the season is underway，the team will only start scoring from the next round after registered with 12 play ers．
－When selecting your team，you must select： 1 Point Guard， 1 Shooting Guard， 1 Small Forward， 1 Power Forward， 2 Centres， 2 Guards（Either a Point Guards or Shooting Guards）， 2 Forwards（Either a Small Forwards or Power Forwards）， 2 Utilities（can be any position）（this includes 4 Bench Players； 1 in each position）
－Starting lineup：PG，SG，SF，PF，C，UTL，Guard，Forward
－Bench：Guard，Forward，Centre，UTL
－Only starting eight will score points towards team total，while bench four will only score if a player in the matching position does not play．
－Need to select the Team within the initial $€ 10,000,000$ Salary Cap．
－If the team is not filled with 12 Players before the start of the season，the team will be completed using our intelligent Smart Auto－Fill feature．
－The player is selected as Captain（Captain will score double）
－The player is selected as Vice Captain（Vice Captain will act as an emergency if Captain does not play）
Source：https：／／fantasychallenge．euroleague．net／\＃help／game－guidelines
The team selection sample is shown in Figure 2．The positions for selections in Euroleague Fantasy Game shown in Table 4.

Findings／Results


Graphic 1．Performance index rating averages of the most selected 80 players according to the player positions

The performance index rating averages of the players according to the player positions shown in Graphic 1．The results show that 14 PG\＆SG players have the most performance index rating with an average of 14.36 ． 10 PG players are second in the list with an average of 12.54 performance index rating． 20 Center players are third in the list with an average of 12.51 performance index rating．


Graphic 2．Performance index rating averages of player positions according to F8 teams and last eight teams．
The cluster analysis of performance index rating according to F8 and last 8 eight teams＇ players of the 2017－2018 Euroleague season shown in Graphic 2．The players on F8 teams played with an average of 12.53 performance index rating，while players on none participated F8 teams played with an average of 10.95 performance index rating．Players playing the pg\＆sg positions have the most performance index rating with an average of 16．01．The most significant difference is also between the $\mathrm{pg} \& \mathrm{~s} g$ players in F 8 teams and last eight teams with a 3.35 performance index rating．There is no SF\＆PF and SG players in the F8 teams in the list of most selected 80 players by Euroleague Fantasy Challenge players．


Positions
Graphic 3．Performance index rating averages of the home games and away games according to the player positions

The performance index rating averages of player positions according to home games and away games shown in Graphic 3．Home teams players have more performance index rating than away teams players with an average of 12.12 ．Away teams players have remained an average of 11.06 performance index rating．PG\＆SG players are first in the list of home games with an average of 14.93 performance index rating．PG\＆SG players are also first in the list of away games with an average of 13.77 performance index rating．

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Graphic 4. Performance Index Rating averages according to player positions in teams win and loss matches

The performance index rating averages of player positions according to team wins and team losses are shown in Graphic 4. The players on the winning teams played with an average of 13.21 performance index rating and with $10 \%$ winning bonus points they reach 14.34 performance index rating. Losing teams' players have an average of 10.09 performance index rating. PG\&SG players have an average of 16.45 performance index rating in winning games. PG\&SG players have an average of 12.21 performance index rating.

## Conclusions

The findings of the current study highlight the performance index rating of basketball players related to their player positions. It is suggested that the Euroleague Fantasy Challenge Coaches have to find the best players to perform each week games for their fantasy basketball teams.

Specifically, in today's basketball game, there a lot of 1vs1 plays, the pace of the game is increased, and three-point shot attempts increased like never before. According to this information, the Euroleague Fantasy Challenge Coaches prefer to play with the players can drive to opponent's basket and can shoot the basketball from long range. The means also gives information about how the PG-SG players affect the game in Euroleague B asketball and show the importance of playing two different positions and the disappearance of traditional play makers.

## Conflict of Interest

The author has not declared any conflicts of interest．

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