

THE EFFICIENCY OF ROMANIAN PLAYERS, COMPARED BETWEEN THE TWO NATIONAL COMPETITIONS: ROMANIAN CUP AND NATIONAL LEAGUE, DURING THE 2021-2022 SEASON

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ABSTRACT. Premises: Completing this kind of research is making it easier to gather, process and analyse these types of data to create a database that would house all the information related to the players' behaviour and tendencies and help coaches take objective decisions in real time during games. **Subject of research:** All data and analysis were completed based on three Romanian players, part of the U-BT Cluj-Napoca basketball team, during the 2021-2022 season, and their performance in both the Romanian Cup and the National League competitions. **Method:** The research was completed based on main and relevant reference points from the already published literature. Data collection was done through examination and recording of key parameters specific to the game of basketball. The subsequent analysis of data was completed utilizing statistical and mathematical methods. **Hypothesis:** Documenting and understanding the various tendencies within their play for the members within the team are critical for a coach to be able to make robust decisions. Comparing and studying the player's performances and results in competition games allows for a better, realistic appreciation of each player's contribution and role within the team, which in turn makes the coach's decisions optimal. **Results:** The statistics for the young Romanian players (U23) – shooting percentages, offensive and defensive rebounds, interceptions, blocks, assists, turnovers, points scored are presented and analysed. Based on that, a comparative model was completed regarding the performance of the Romanian players in the respective two national competitions: Romanian Cup and National League, that have different

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rules related to number and presence of Romanian players in the game, throughout the game. In the Romanian Cup, the rule says that each team must play with two (2) Romanian players on the field for the entire game, of which at least one is under 23 years old, compared to the National League where the rule says that each team should play with at least one (1) Romanian player on the field the entire game, and additionally the player should be under 23 years old during the 1st and 2nd quarter and the 2nd quarter. **Conclusion:** Observing, recording, processing, and analysing data/statistics of the game provides the coach with objective data which he can use to better know the players, the overall evolution of the team and thus make more correct decisions during games. The comparative analysis of the data shows that, in the Romanian Cup, the players have a better game performance, due to the more playing time compared to the National League, where the playing time is reduced by half. By adopting the rules used in the Romanian Cup, the efficiency of young players increases, thus contributing to raising the value of the team and implicitly to increasing the value of native players for representative teams.

Keywords: *basketball, players, men, Cluj-Napoca, Romanian Cup, National League.*

REZUMAT. Eficacitatea jucătorilor români în cele două competiții naționale Cupa României și Liga Națională, în anul competițional 2021-2022. Premise.

Prin realizarea unei astfel de lucrări se contribuie la crearea unei baze de date. Concomitent, prin strângerea, prelucrarea, studierea și fructificarea acestor date se ajunge la o mai bună cunoaștere a jucătorilor, la ajutorul dat antrenorului pentru luarea unor decizii pe baze obiective, în timp real. **Subiecți.** Cercetarea s-a realizat pe trei jucători autohtoni, componenți ai echipei de baschet UBT Cluj-Napoca, care au făcut parte din lotul echipei în anul competițional 2021/2022, atât în Cupa României cât și în Liga Națională. **Metode.** Pentru a comunica tema analizată s-a folosit studiul literaturii de specialitate. Adunarea datelor s-a obținut prin examinarea și înregistrarea principalilor parametrii specifici jocului de baschet. Prelucrarea datelor s-a realizat folosind metoda statistico-matematică.

Ipoteze. Documentarea și înțelegerea diverselor ipostaze privind deprinderile în joc al jucătorilor echipei prezintă premise pentru ca antrenorul să-și dirijeze munca pe principii reale. Prin compararea performanțelor obținute de jucători în competiție se poate vedea o mai bună apreciere și ierarhizare a contribuției, a rolului pe care îl au aceștia în cadrul echipei, care să direcționeze la luarea unor decizii optime. **Rezultate.** Sunt arătate și examinate cei mai importanți parametrii realizați de către jucătorii români tineri (U23) – aruncările la coș, recuperările ofensive, recuperările defensive, interceptiile, capacele - blocările mingilor aruncate la coș, pasele decisive, mingile pierdute, punctele marcate. La sfârșit, s-a obținut un model comparativ urmărind comportamentul jucătorilor români în cele două competiții, Cupa României și Liga Națională. În Cupa României, regula jucătorilor români pe teren este ca fiecare echipă să joace cu doi jucători români pe teren, tot meciul, dintre care cel puțin unul să fie sub 23 de ani, în comparație cu Liga Națională unde regula jucătorilor români pe teren este ca

fiecare echipă să joace cu cel puțin un jucător român pe teren tot jocul, dar în sfertul 1 și sfertul 2, acesta să fie sub 23 ani. **Concluzii.** Observarea, înregistrarea, prelucrarea și analiza datelor urmăresc o serie de caracteristici ai jocului care sunt prezentate antrenorului, date reale pe baza cărora acesta poate să aprecieze mai bine jucătorii, desfășurarea de ansamblu a echipei și astfel să ia decizii mai exacte. Din studierea comparativă a datelor rezultă că, în Cupa României, jucătorii au deprinderi în joc mai eficiente, datorită timpului de joc mai mare față de Liga Națională, unde timpul de joc este redus la jumătate. Adoptând regulamentul folosit în Cupa României, eficacitatea jucătorilor tineri crește, astfel contribuind la ridicarea valorii echipei și implicit la creșterea valorii jucătorilor autohtoni pentru echipele reprezentative.

Cuvinte-cheie: *baschet, jucători, masculin, Cluj-Napoca, Cupa României, Liga Națională.*

INTRODUCTION

As indicated by (Colibaba-Evuleț and Bota, 1997), any two teams playing the game of basketball have players with exceptional somatic and genetic features whose physical capabilities are trained to alternate between submaximal intensity and short bursts of maximal effort (Baroga, 1994) to be as successful as they can be while playing offence/defense against their opponents (Teodorescu, 1975). Considering all the aspects of the basketball game in general, one of the most important ones is related to the shooting of the ball, which requires spatio-temporal representation, a special kinesthetic skill, high precision, and efficiency – all of these achieved and targeted trained over the course of time (Ionescu and Dîrjan, 1997).

Taking all these factors into consideration, in order to achieve a high-performance level later in their career, young basketball players need to train hard for at least ten to twelve years. Therefore, the selection process and the initial physical preparation needs to start very early, around seven to nine-years old as the optimal age for peak performance would be around twenty-five to twenty-seven years old (Răduț and Răduț, 1989). The training to reach this peak level is a very complex and long-term process, that needs to be systematic and have a gradually increased load, based on principles anchored in educational, biology and psychology methods for a multidisciplinary approach, the result of which will be an athlete that is adaptable to required high level of efforts and continue to better themselves by participating in competitions (Dragnea and Mate, 2002).

For a basketball coach, similar with other sports, the planning and execution of the training and participation in competitions require the systematic action of several objective and subjective factors, such as the methodology and technology used, the environment and human resources at its disposal and the coordination and management of any activities (Florescu, 1985).

Currently, any coach would need to have the support and expertise of specialists from different areas: training theory and methodology, medicine, psychology, sociology, computer science etc., contributing to the right technical and non-technical environment for them to be able to reach the high-performance required by today's competitions level (Epuran, 2005).

The supporting cast's research and guidance is contributing to the player's health, the more efficient training protocols and the right level of effort in training (Nicu, 1993).

There are many studies and research papers focusing on the different aspects of the basketball game. Depending on the required outcome, some of the research has been focused on the teaching approach for learning and perfecting basketball skills some are looking at teachers' specialization in the higher learning environment for sport and physical education, some are covering the theory and methodology of physical training, the progressive training or how to adapt and optimize the coaching activities using research studies' results.

Alongside these general approaches, other studies looked at more specific topics, such as: a mathematical and physical approach to the game of basketball, the biomechanics of technical skills, researching the in-game behaviour, the evolution of technical elements, physical exercise, and many others (Pop and Roman, 2003; Predescu and Negulescu, 1998; Colibaba-Evuleț and Bota, 1998; Berceanu and Moanță, 2007; Vicenzi et al., 2007; Hajossy and Macura, 2011; Brancazio, 1981; Hay, 1980; Feflea, 2011; Schmidt and Clausmayer, 1995; Smirnov, 1973; Feflea and Roșca, 2013).

The studies completed to explore and develop different aspects of the game of basketball are based on significant statistic information, gathered by observing and recording the players' behaviour during games (Bachner, 1998). These data points are considered by the specialists in the field the basis for an objective evaluation of the game of basketball and they constitute the start for databases that would facilitate an objective analysis and help know the teams as a whole and the individual characteristic of the players as well (Maroti, 1996). Any researcher can then access any of the sites for any competition, any organization (national or international) in order to access the existing data or can collect them by personally recording them as well.

STUDY SUBJECTS AND METHODOLOGY USED

Three Romanian players were part of this study: two were U23 (under 23) and one was over 23 years old, all of them members of the U-BT Cluj-Napoca basketball team, which participated in the 2021-2022 season, playing in both the Romanian Cup competition and in the National League. All the information regarding the level of knowledge and interest in the topic as well as establishing the indicators for game performance and gathering and analysis of the data points was scientifically based and documented. The data points observed and recorded during the 5 games of the "Final Eight" tournament of the Romanian Cup and during the 9 play-off games in the National League covered the following: shots, offensive and defensive rebounds, steals, blocks, assists, turnovers, points – all related and compared to the playing time of each player that has been the subject of the study; all data points were taken off the respective competition's website. The following abbreviations have been used in the registration process: Min / GAMES - minutes played per game; 3PA –three points shot attempt; 3PS – scored three points shot; 2PA – two points shot attempt; 2PS - scored two points shot; 1PA – attempted free throws ; 1PS – scored free throws; REB O - offensive rebounds (offensive) ; REB D - defense rebounds (defense), ST/GAMES - number of steals ; BS / GAMES - number of blocked balls; AS / GAMES - the number of assists ; TO / GAMES - the number of turnovers; WB / GAME – the number of balls won; FV/GAME – the number of balls lost; P / GAMES - Total points scored per game, EFF - The players' efficiency (coefficient of efficiency). Data processing and calculating averages, percentages, efficiency indicators were completed through the statistical-mathematical method.

PURPOSE OF THE STUDY

Objective assessment of the game performance of the best Romanian U23 players (under 23) members of the team, using the specific regulations of the Romanian Cup to raise the value of the native(local) players, where you have the possibility to use two Romanian players compared to the regulations of the National League, where, in comparison, the playing time is reduced by half and the requirement is to use only one Romanian player.

Comparative analysis of the results and the efficiency for these young players within the two competitions (with different sets of rules).

Documenting and providing the coach with an objective data set that would help create and implement the training schedule in such a way that would help support an optimal coaching approach during games and competition and better resource/player allocation.

HYPOTHESES

A coach would need to not only study but know the different aspects of all players' performance during games to be able to objectively adjust their training process and approach in coaching.

Comparison of the performances achieved by the U23 players in competitions will help the coach to be able to know them better and grade them thus highlighting their contribution to the team, leading to the coach making optimal decisions.

RESULTS AND KEY CONSIDERATIONS

Comparing the games and their playing time, we find that all players have been part of five games in the Romanian Cup 5, except for the KN player, who played in only three games. If we look at the National League, all the players have been part of nine games. The average playing time of the three players who were the subject of the research is higher in the Romanian Cup (except for the KN player who played 3 games - injured), than in the National League, the reason being the specific regulations created in the Romanian Cup where you have the possibility to use two Romanian players, compared to the regulations of the National League, where the playing time is reduced by half and the requirement is to use only one Romanian player.

Table 1. Games and minutes played

	Romanian Cup			National League		
	GS	CLA	KN	GS	CLA	KN
Games	5	5	3	9	9	9
Minutes	100.11	122.9	39.86	130.96	117.23	149.1
Average/ Game	20.022	24.58	13.28	14.55	13.02	16.56

One of the indicators of performance in games is the ball shooting efficiency index, given the main purpose of the basketball game is to score as many points as possible.

The analysis of the shots to the basket shows that the three-point attempts represented 35.24% the average of the three players in the Romanian Cup and 21.24% in the National League. In the case of two-point throws, the average of the three players in the Romanian Cup was 47.41% compared to 56.12% in the National League. The average for the free throws of the three players in the Romanian Cup was 44.79% compared to 43.86% in the National League. It is noticed that the average percentages of the three players in the Romanian Cup, both at 3 points and free throws, is higher than in the National League, while the average of the percentages of 2 points the three players have a lower average in the Romanian Cup.

Table 2. Efficiency Index of shooting

Shots	Romanian Cup									National League								
	GS			CLA			KN			GS			CLA			KN		
	A	S	%	A	S	%	A	S	%	A	S	%	A	S	%	A	S	%
3 points	14	4	28.57	23	12	52.17	4	1	25	14	1	17.14	13	3	23.07	17	4	23.52
2 points	22	7	31.81	9	4	44.44	9	6	66	33	21	63.63	18	6	33.33	35	25	71.42
1 point	36	11	30.55	32	16	50	13	7	53.84	47	22	46.80	31	9	29.03	52	29	55.76

The ranking based on the points scored shows that the three players have an average of points scored per game higher in the Romanian Cup, 8.94 points per game compared to the National League, where the players have an average of 6.99 points per game. From the above table, we note that the specific regulation created in the Romanian Cup to raise the value of the native (local) players compared to the regulation of the National League, where the playing time is reduced by half and the obligation to use only one Romanian player compared to the Romanian Cup where you have the possibility to use two Romanian players, gives a greater chance of affirmation to the native (local) players.

The number of ball possessions is playing an important role in the game strategy and execution. Ball possession is obtained after a field goal scored by the opponent or because of a misconduct, a wrong action of a defense player or as a result of a player's individual moves (a rebound, intercepting a pass, a block, a steal etc.).

Table 3. Player ranking based on points contributions

Player	Scored shots Romanian Cup			Total	Game average	Scored shots National League			Total	Game average
	3pct.	2pct.	1pct.			3pct.	2pct.	1pct.		
GS	12	14	11	37	7.4	3	42	22	67	7.44
CLA	36	8	16	49	12	9	12	9	30	3.33
KN	3	12	7	22	7.33	12	50	29	91	10.11
TOTAL	51	34	34	108	8.94	24	104	60	188	6.99

Out of all of the above, we have focused next on offensive rebounds, given the important role they play in ball possession. The difference between two teams in what concerns possession of the ball is in tight connection with the number of offensive rebounds made by the members of each team (Dirjan, 1974).

Table 4. Offensive and defensive rebounds

Indicator	Romanian Cup			National League		
	GS	CLA	KN	GS	CLA	KN
Offensive rebounds	4	2	0	6	9	12
defensive rebounds	7	12	5	13	15	14
Total	11	14	5	19	24	26
Average/Game	2.2	2.8	1.66	2.11	2.66	2.88
Average Cup/League	2.22			2.55		

Comparison of the rebounds' averages per game shows that the players have an average of 2.22 rebounds in the Romanian Cup, compared to 2.55 obtained in the National League. The number of rebounds made in the National League per game is higher due to the higher number of games played (nine matches compared to five) and due to the KN player who in the Romanian Cup played only in three games (injured) compared to five games.

Looking at the other ways of gaining possession, from Table no. V it shows that steals numbers in the Romanian Cup are better than the numbers in the National League, but the results on block shots are better in the National League, except for the CLA player who has as average better results in the Romanian Cup.

Table 5. Steals and blocks

Parameter	Romanian Cup			National League		
	GS	CLA	KN	GS	CLS	KN
Steals	0.5	0.8	0.3	0.1	0.3	1
Blocks	0	1.8	0	0.5	0.4	0.4

Table 6. Comparative analysis of the performance model

Parameter		Romanian Cup	National League
MIN/GAMES		19.29	14.71
3 P	S	5.6	2.66
	A	13.66	14.66
	%	35.24	21.24
2 P	S	5.66	17.33
	A	13.33	28.66
	%	47.41	56.12
1 P	S	11.33	20
	A	27	43.33
	%	44.79	43.86
REB	O	4	5.33
	D	7.33	11.66
	T	11.33	16.99
ST/GAME		1.33	3.66
FV/GAME		1.66	1
WB/GAME		13	21.66
AS/ GAME		1.15	1.18
TO/GAME		1.26	0.81
TOTAL POINTS SCORED/ GAME		7.26	5.7
EFF/GAME		6.77	6.29

Based on the mathematical averages obtained at the studied parameters, we compared the performances of the Romanian players in the Romanian Cup and in the National League, which can constitute a model of their game.

CONCLUSIONS

The observation, recording and analysis of game performance data points for players gives the coach objective information regarding them and an opportunity to build a database for both his own players and opponent team's players. Processing and analysing the data leads to a better understanding and awareness of the players' performance, resulting in better and more objective decisions during games.

The comparative analysis of the data shows that, in the vast majority of situations, the players obtained better results for game indicators in the Romanian Cup compared to the National League. Using the specific regulation created in the Romanian Cup, where you have the possibility to use two Romanian players on the court, compared to the regulation of the National League, where the playing time is reduced by half and the obligation to use only one Romanian player, we could raise the value of the native players, thus contributing to raising the value of the team and implicitly to increasing the value of the native (local) players for the representative teams.

SPECIFICATIONS

The data points related to game parameters analysed were downloaded from the official website of the Romanian Basketball Federation and respective competition noted. A special thanks goes out to the players, coaches, and managers of U-BT Cluj-Napoca for collaboration and support.

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