SCIENTIFIC WORK REVIEW

Dejan Ćeremidžić, Tatjana Ćeremidžić
Faculty of Sport and Physical Education Pale

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DIFFERENCES IN THE SITUATION EFFICIENCY BETWEEN TEAMS ADRIATIC AND EURO BASKETBALL LEAGUE IN THE SEASON 2012

SUMMARY

The study was conducted to determine differences between the ABA team and Euro League in season 20011/2012, in eight standard situational efficiency indicators in basketball. Multivariate analysis of variance and Student's t-test results are obtained which show the difference between the teams ABA and Euro League. Teams from the Euro league positively define the best overall jump variables (attack and defense), the percentage of balls pocketed by one point and steals, while teams from the ABA league best defines a variable percentage of positive two-point shot.

Keywords: Basketball game, the standard situational efficiency indicators, ABA League, Euro League.

1. INTRODUCTION

In order to monitor events in the FIBA basketball game 13 standardize the situational efficiency indicators that are monitored at every official match. The proposed situational efficiency indicators: the number of balls pocketed from the game in the basket for two points, the number of attempts to sink the ball in the basket of the game by two points, the number of balls inserted into the basket of the game by three points, the number of attempts to sink the ball in the basket of the game for three points, the number of balls inserted into the basket behind the free throw line (one, two and three), the number of attempts to sink the ball into the basket behind the free throw line (one, two and three), the jump to defend, rebound, assists, personal fouls, turnovers, received the ball and blocking shots.

In this paper, we analyzed eight of the 13 indicators of effectiveness in the game (average points per game, shooting percentage for 1, 2 and 3 points, total rebounds (attack and defense), steals and team foul.

1.1 Analysis of the Game

Basketball game is characterized by a high intensity so that lists 105 highly intense

activity that lasts an average of 1.7s, and repeated every 21s (McInnes et al., 1995). Taking into account the average values of different intensities of movement, we can say that basketball player during a game spend 15.5% in standing, walking, slow jogging 14.4% 11.6%, 10.4% high-speed running, sprinting, and 5.3% in the specific activities (movement of the defensive, running back jumping) 42.8% (Abdelkrim et al., 2007). Another important parameter is the average duration of attacks in basketball is 7-18 with the pozicionii attack (75% of total attacks), while the transition takes 4-6 s attack (25% of total attacks) (Gomes and Tavares, 2003). During game play, on average, a total of 180-200 attacks. When analyzing the specific requirements of individual gaming positions can be concluded that there are significant differences including the backs and wings spend significantly more time in the percentage of high-intensity activities of the centers (17.1% and 16.6% compared to 14.7%) (Abdelkrim et al., 2007).

2. METHOD

All data were processed in the software package Statistica for Windows, and the modules are used to calculate descriptive parameters, the total difference between the teams in two different leagues (discriminant analysis) and the difference between the teams in the ABA and Euro league in each variable separately, (t - test for independent groups of subjects).

Applying Discriminant analysis we tried to determine whether there is a statistically significant difference at the global level between the teams and leagues Adritic Euro leagues based on 8 standard situational efficiency indicators in basketball. Further statistical analysis that included implementation of t-test showed that the variables individually manage to vary significantly Adritic League and Euro League.

2.1. The sample

Data were collected on Adritic league matches in the regular season 2011/2012 and the Euro league, all matches of the team that entered the top 16 teams. The collected data were entered into the data matrix so as to allow grouping of teams based on the tables at the end of the regular work season in Adriatic league 14 teams in the Euro league 16 teams, which allowed further statistical comparison of the teams in the league.

2.2. Sample of variables

The sample comprises 8 manifest variables of standard situational efficiency indicators in basketball. These are:

- average number of points per game
- percentage of balls inserted into the basket in the space bounded by lines of 6.75 meters.
- percentage Sink the ball in the basket outside the area that borders the line 6.75 meters.
- percentage of balls inserted into the basket behind the free throw line.
- total jump (attack and defense)
- Assistance
- Steals

- team's fault (foul)

The collected data are official statistics carried in every game. Registration data was carried out by specially trained statisticians for the job of computer programs for keeping statistics on the basketball matches.

3. RESULTS AND DISCUSSION

T-test (Table 1) shows that show a statistically significant difference between the two teams from different leagues in the variables percentage shot for two points, the total jump (defense and attack), steals a lesser extent, the percentage by one point. Adriatic league teams from having a better shooting percentage in the variables for the two points and steals, while teams from Euro leagues achieving better results and percentages of variables and the percentage of the total jump shot for one point.

Table 1. T-test, statistically significant differences between the teams

	Mean el	Mean ad	t-value	df	p	F-ratio variancs	p variancs
POEN_PRS	75.21	76.47	-.67	28	.507	1.277	.643
POEN_2	50.56	54.47	-3.90	28	.000	1.291	.629
POEN_3	34.48	33.16	1.03	28	.311	1.042	.929
POEN_1	75.10	72.85	1.80	28	.081	1.504	.465
SKOK_TOT	34.14	30.47	5.99	28	.000	1.209	.737
ASIST	14.24	14.12	.18	28	.853	1.157	.778
STOLEN	6.14	7.41	-3.25	28	.002	1.150	.808
TO	12.90	13.31	-.97	28	.335	1.098	.873

Based on the results in Table 2 we see that the one obtained by discriminant function and the correlation value is high, indicating that the situational efficiency indicators 8 different teams from the two-level and quality of the competition.

Table 2. Values of discriminant functions and test of significance of discriminant functions by Wilks' Lambda test and Chi ² test

	Eigen-value	Canonicl R	Wilks' Lambda	Chi-Sqr.	df	p-level
0	4.719	.908	.174	41.85	8	.000

The obtained values of different teams at the level of significance, 000 with a relatively high correlation, 908th The results in Table 2 shows the statistical significance of

discriminant functions Wilks and Burttlet Chi ² test at .000.

In Table 3 are given values of discriminant function coefficients. The variables that contribute most to the team rezlici Adriatic League and the Euro are: average total jump (defense and attack), the percentage shot for two points, steals and shooting percentage by one point.

Table 3. Correlations between individual variables and discriminant functions

Var	Root 1
POEN_PRS	.058
POEN_2	.339
POEN_3	-.090
POEN_1	-.157
SKOK_TOT	-.521
ASIST	-.016
STOLEN	.283
TO	.085

Centroids

	Root 1
el	-1.96
ad	2.24

According to these results the greatest positive contribution to the success (distinguishing the two teams in the league) in a basketball game shooting percentage for the two points, which is an indicator of the success of the attacking team. It can be assumed that the Adriatic League team had more shots from the favorable opportunity, and better shot selection and more shots from the zone of a high percentage shot (perimeter). Better success rates in this variable can be attributed to the different style and philosophy of the game. Teams competing in the Euro league placed more emphasis on defensive play, the players tend to come into position for a smooth shot, so the percentage shot for two points a little lower.

The variable total jump (attack and defense) in the Euro League teams at a higher level of approximately 4 rebounds more per game, which can be attributed to a number of attempts to reach that point. faster game evroligaških team.

Euro League teams from making an average of 1.5 errors fewer per game, so based on that information we can conclude that the ball more "care", ie. individual tactics on a higher level of players who play in the Euroleague teams.

The variable percentage shot for one point, free throw, the more success they have teams that compete in the Euro League and to three percent, which was expected given the level of leagues in which teams compete.

The results obtained by discriminant analysis confirmed that the standard situational efficiency indicators statistically different teams competing in two different levels of competition.

4. CONCLUSION

The aim of this study was to determine whether the ABA teams from different leagues and euro in eight standard situational efficiency indicators in basketball. Differences between the eight teams in the area of standard situational efficiency indicators in basketball were analyzed discriminant analysis and t-test.

Presented significantly different teams from the ABA, the Euro League, and it is possible to conclude that the three standard situational efficiency indicators clearly distinguished successful from unsuccessful teams and confirms the high predictive value of three standard indicators of situational efficiency in basketball for the final result is defined as a victory. The data is somewhat surprising is that the players who play in the ABA league teams have been successful for four percent of the variables percentage shot for two points.

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