

Analysis of the Performance of the Bolabaket Bhayangkara Bea Cukai Jaya (BBJ) Team in Participating in the Surabaya Champion League (SCL) 2022

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Abstract

Performance analysis through match statistics has developed and is inseparable from individual or team sports to observe and evaluate individual or team playing performances. This study aims to analyze four indicators of playing performance in FIBA Live stats match statistics, namely field goal percentage (FG%), free throw percentage (FT%), rebounds (REB), and turnovers (TOV) from the Bhayangkara Bea Cukai Jaya (BBJ) Basketball team in participating in the Surabaya Champion League 2022. This research is quantitative descriptive research with descriptive statistical analysis. The analysis results show that the average field goal percentage (FG%) is 29.82%, with eight players above the average and seven below the norm to be concluded in the "sufficient" category. The average free throw percentage (FT%) is 27.69%, with 8 players above average and 7 players below average, so it is concluded in the "not good" category. Average total rebounds (TREB) is 7.93 times, with 4 players above average and 11 players below average, so it is concluded in the "excellent" category. Average turnovers (TOV) were 2.73 times, with 9 players below average and 6 players above average, so it was summed up in the "excellent" category.

Keywords: Statistics, Game Analysis, Basketball.

INTRODUCTION

Basketball is among the most popular and famous sports for various age groups in Indonesia and the world. Students like playing basketball because basketball gives them new community, status, and more entertainment (Sudiran, 2021). Generally, in big cities, many basketball communities or clubs are established as a forum to nurture athletes and or as a place for basketball lovers to stay active in basketball. To support existing basketball communities or clubs, amateur to semi-professional competitions, including the Surabaya Champions League (SCL), are often held.

Surabaya Champions League (SCL) is held in Surabaya, where participants are communities or basketball clubs from Surabaya with team members aged at least 35 years. In 2022, SCL was participated by eight clubs from Surabaya, which were then divided into two pools. Slayers Surabaya, Diablo Basketball, Jokerz Basketball, and Elite Basketball are members of Pool B. Meanwhile, pool A is filled by Sharks Surabaya, Bhayangkara, Bea Cukai Jaya (BBJ) Basketball, Legion XX, and Familia Surabaya. This competition was held on July 10, 17, 24, and 31, 2022, at Goci Field Surabaya, and the Sharks Basketball team came out as the champion.

As a game that prioritizes teamwork and individual playing skills, basketball game performance as a team or individual can be measured quantitatively using a separate instrument when competing. FIBA Live stats are Software match statistics provided by FIBA, which can be accessed and used for calculating basketball match statistics worldwide (Haqqi, 2016). Generally, the terms used in English-language basketball game statistics, including field goals made (FGM), field goal attempts (FGA), field goal percentage (FG%), free throws made (FTM), free throw attempts (FTA), free throw percentage (FT%), offensive rebounds (OREB), defensive rebounds (DREB), total rebounds (TREB), and turnovers (TOV) (Oliver, 2004).

Analyzing match statistics can help evaluate a team or individual during a match to guide the training process (Taufik et al., 2020). Besides that it is also to understand dominant individual characteristics, interactions between players, and match preparation (Sudiran, 2021). Performance Analysis results through match statistical data can also be used as evaluation material to achieve better results in the next match. Sports analytics experts understand that the basketball game is still human (Priyadi, 2022). In addition, the analysis also makes it easier to use match tactics (Mandić, Jakovljević, et al., 2019), solve the psychological problems of hosting (García et al., 2009), and optimization of training program preparation from match analysis (Conte et al., 2018).

Factor Defense and offense Determining the victory, so it needs to be considered (Choi et al., 2015; Haqqi, 2016; Mandić, Jakovljević S., et al., 2019). Defense is an attempt by a player to hold back or make it difficult for an opponent to score. The offense is an attempt to break through the opponent's defense to score. There are four factors: Offense and Defense, which determine the game's efficiency, i.e., shot percentage, rate, Turnover percentage, offensive rebounds, and free throws. Shooting percentage becomes the most crucial statistic (Cabarkapa et al., 2022; Oliver, 2004a).

Previous research by (Anam & Wicaksono, 2022) in the Unnes Journal of Sport Sciences with the title Statistical Analysis of Semarang State University Men's Basketball Team Match in the Student League Championship Central Java and Yogyakarta Conference 2019 became a reference for this study. In addition, there is another relevant research, namely by Taufik et al. (2020) entitled Statistical Analysis of Indonesian Basketball Elite Team Matches. Performance Analysis through match statistics data is critical so that coaches and players can improve team or individual performance. The understanding of coaches and basketball team management in Indonesia still needs to be improved. The many coaches and basketball team management in Indonesia prove this. When getting statistical results, do not analyze, where the results of Performance Analysis through statistical data can be used as study material to evaluate match results.

METHOD

This research is quantitative descriptive research. The data used is secondary data in the form of match statistics obtained from matches on July 10, 17, 24, and 31, 2022, in Surabaya using the FIBA Live Stats software instrument. The variables in this study were field goal percentage (FG%), free throw percentage (FT%), total rebounds (TREB), and turnovers (TOV). The population in this study is Surabaya Champion League 2022 participants, and the study sample is 15 players from the Bhayangkara Bea Cukai Jaya (BBJ) Surabaya basketball team.

RESULTS AND DISCUSSION

Result

This study analyzes four determinants of game efficiency performance analysis from the Bhayangkara Bea Cukai Jaya (BBJ) Surabaya team, which are variables in this study, namely field goal percentage (FG%), free throw percentage (FT%), total rebounds (TREB) and turnovers (TOV). The results of the quantitative performance analysis are presented in the following figure:

Table 1. Game 1 Match Statistics

No.	P	PTS	2PTS		3PTS		FT		Reb			A	S	BS	F	TO	PS
			M	A	M	A	M	A	OR	DR.	Reb						
1	TA	13	2	8	2	3	3	6	1	7	8	-	-	-	4	2	11
2	PW	14	6	16	-	2	2	4	2	4	6	1	1	-	1	4	15
3	MBA	2	1	11	-	1	-	-	-	2	2	2	-	-	1	2	4
4	RR	-	-	1	-	-	-	-	-	2	2	-	2	-	-	-	4
5	WTU	4	1	2	-	-	2	4	-	3	3	2	1	-	3	2	6
6	MM	6	0	3	1	3	3	4	1	2	3	-	-	-	-	2	7
7	OI	9	2	4	1	1	2	2	-	4	4	-	-	-	2	-	7
8	H	3	0	3	1	6	-	-	1	1	2	1	-	-	1	2	3
9	TY	6	3	4	0	0	0	0	3	4	7	-	-	-	5	1	5
10	AU	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	SJ	-	-	2	-	-	0	-	-	-	-	-	-	-	-	-	-

12	BT	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-1
Total		57	15	54	5	16	12	20	8	29	37	6	4	1	18	15	61

Table 2. Game 2 Match Stats

No.	P	PTS	2PTS		3PTS		FT		Reb			A	S	BS	F	TO	PS
			M	A	M	A	M	A	OR	DR	Reb						
1	TA	15	6	8	-	1	3	7	-	6	6	1	-	-	1	3	15
2	PW	11	4	10	1	3	-	-	-	2	2	-	1	1	2	1	6
3	MB A	14	6	9	-	3	2	4	1	4	5	1	1	-	4	5	11
4	RR	5	-	3	1	1	2	6	-	4	4	1	-	1	3	1	5
5	WT U	2	1	2	-	-	-	-	-	3	3	1	-	-	1	-	4
6	MM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
7	OI	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
8	H	3	-	-	1	7	0	0	-	2	2	-	1	-	-	2	4
9	TY	6	3	8	0	0	0	0	-	6	6	-	1	-	3	1	7
10	GS	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
11	YM	3	-	1	-	0	3	6	-	2	2	-	-	-	4	1	1
12	AU	-	-	-	-	4	0	0	-	4	4	2	-	-	2	3	4
13	SJ	2	1	4	-	1	0	1	1	1	2	-	-	1	-	2	-
14	GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	BT	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-
Total		61	21	45	3	20	10	24	2	34	36	6	4	3	22	17	59

Table 3. Game 3 Match Stats

No.	P	PTS	2PTS		3PTS		FT		Reb			A	S	BS	F	TO	PS
			M	A	M	A	M	A	OR	DR	Reb						
1	TA	6	3	10	-	3	-	-	2	6	8	2	5	-	2	-	16
2	PW	10	5	11	-	5	-	2	1	3	4	-	3	-	5	5	7
3	MBA	9	3	6	1	4	-	-	1	2	3	1	3	-	2	1	9
4	RR	-	-	1	-	-	-	-	1	3	4	-	-	-	5	2	-1
5	WTU	10	3	5	1	1	1	3	1	1	2	-	3	-	3	1	7
6	MM	4	0	4	1	9	1	3	1	-	1	-	3	1	-	-	6
7	OI	6	0	1	2	3	-	-	1	2	3	4	1	1	-	2	10
8	H	12	0	3	4	8	-	0	1	1	2	3	-	-	3	-	6
9	TY	-	-	1	0	0	0	0	-	-	-	-	-	-	1	-	-1
10	YM	4	2	3	0	0	0	0	2	2	4	-	-	-	5	-	1
11	AU	8	1	2	2	2	0	0	1	2	3	1	-	-	2	-	5
12	BT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		69	17	47	11	35	2	8	12	22	34	11	18	2	28	11	65

Table 4. Game 4 Match Statistics

No.	P	PTS	2PTS		3PTS		FT		Reb			A	S	BS	F	TO	PS
			M	A	M	A	M	A	OR	DR.	Reb						
1	TA	14	3	8	2	3	2	7	4	6	10	-	-	1	3	1	14
2	PW	15	5	12	1	4	2	3	2	6	8	-	1	-	3	-	14
3	RR	5	2	2	0	1	1	2	4	8	12	1	1	-	2	2	15
4	WTU	0	0	0	0	1	0	0	1	1	2	4	-	-	3	3	3
5	MM	12	0	1	4	11	0	0	1	1	2	-	-	-	-	-	6
6	H	3	0	0	1	6	0	0	0	0	0	2	-	-	-	-	3

7	TY	0	0	2	0	0	0	0	0	0	0	2	-	1	1	1	
8	GS	5	1	3	0	5	3	7	-	2	2	5	1	-	2	1	10
9	YM	9	4	6	0	0	1	2	-	4	4	-	-	-	3	6	
10	AU	0	0	1	0	1	0	0	-	-	-	1	-	-	3	1	-2
11	BT	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total		63	15	35	8	32	9	21	12	28	40	13	5	1	20	9	70

Table 5. Overall Game Stats

No	P	PTS	2PTS		3PTS		FT		Reb			A	S	BS	F	TO	PS	
			M	A	M	A	M	A	O	DR	Re							
1	TA	48	1	4	34	4	10	8	0	7	25	32	3	1	10	6	56	48
2	PW	50	2	0	49	2	14	4	9	5	15	20	1	1	11	1	42	50
3	MB	25	1	0	26	1	8	2	4	2	8	10	4	-	7	8	24	25
4	RR	10	2	2	7	1	2	3	8	5	17	22	2	1	10	5	23	10
5	WT	16	5	5	9	1	2	3	7	2	8	10	7	-	10	6	20	16
6	MM	22	0	0	8	6	23	4	7	3	3	6	-	1	-	2	19	22
7	OI	15	2	2	5	3	4	2	2	1	6	7	4	1	2	2	17	15
8	H	21	0	0	6	7	27	0	0	2	4	6	6	-	4	4	16	21
9	TY	12	6	6	15	0	0	0	0	3	10	13	-	-	10	3	12	12
10	GS	5	1	1	3	0	5	3	7	-	2	2	5	-	2	1	10	5
11	YM	16	6	6	10	0	0	4	8	2	8	10	-	-	12	1	8	16
12	AU	8	1	1	3	2	7	0	0	1	6	7	4	-	7	4	7	8
13	SJ	2	1	1	6	-	1	0	1	1	1	2	-	-	1	-	2	2
14	GA	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
15	BT	-	-	-	-	-	-	-	-	-	-	-	1	1	-	-1	-	-
Total		250	6	8	18	2	10	3	7	34	113	147	3	6	87	5	25	25

Table 6. Results of Quantitative Analysis of Four Performance Indicators

No.	Name	FG% (%)	FT% (%)	TREB (times)	TOV (times)
1.	TA	42.42	35.71	24	4
2.	PW	35.56	40	14	6
3.	RR	37.50	37.50	20	5
4.	WTU	55.56	33.33	7	4
5.	H	25.00	0	4	2
6.	TY	27.27	0	6	2
7.	YM	60	50	10	1
8.	AU	30	0	7	4
9.	MM	19.35	57.14	6	2
10.	OI	55.56	100	7	2
11.	GS	12.50	42.86	2	1
12.	MBA	32.35	18.75	10	8
13.	SJ	14.29	0	2	0
14.	GA	0	0	0	0
15.	BT	0	0	0	0
Average		29.82	27.69	7.93	2.73

Discussion

The Bhayangkara Bea Cukai Jaya (BBJ) team during the Surabaya Champions League (SCL) 2022 had an average field goal percentage (FG%) performance of 29.82%. Of the 15 players, 8 players had FG% above average, and 7 players had field goal percentages below average. The average free throw percentage (FT%) is 27.69%. Of the 15 players, 8 players had FT% above average and 7 FT% players below average. The average total Rebound (TREB) is 7.93 times. Of the 15 players, 4 rebounded above the average and 11 below the average. Average turnovers are 2.73 times. Of the 15 players, 9 players made turnovers below average and 6 players above average.

Field goal percentages are the sum of 2-pointers and 3-pointers, then divided by the total number of attempted 2-pointers and 3-pointers. The high shooting attempt directly led to a high score (Wang, 2016). Field goal percentages (FG%) owned by the Bhayangkara Bea Cukai Jaya (BBJ) team for four matches showed results that could be categorized as "sufficient" at 29.82%. Individually, 8 out of 15 players have reached the percentage above the team average, and 7 others have not reached the average. The Bhayangkara Bea Cukai Jaya (BBJ) team needed more training program planning in 2-pointer and 3-point shooting accuracy. 2-pointers and 3-pointers are fundamentally important in basketball, where a point basketball game is one of the factors in winning (Aprilia et al., 2021). Shooting consists of several techniques, including jump shoot, lay-up, set shoot, hook shoot, underhead shot, Dunkin shot, reverse lay-up shot, and all kinds of movements with the effort to get the ball into the hoop inside the basketball court (Khoeron, 2017). Techniques Shooting, owned by the Bhayangkara Bea Cukai Jaya (BBJ) team, requires planned and programmed training to improve Field goal percentages. According to (Wismanadi, 2019), shooting is the ability to shoot the ball by putting the ball into the opponent's hoop to score points.

In the game of basketball, the shot free throw is one of the basic techniques, and one or two points of free throw often determine the outcome of the game (Yang, 2014). The average free throw percentage (FT%) of the team can be categorized as "not good" with a percentage of 27.69%. Indicators free throw shows the ability to shoot the players at close range as a bonus shot from fouls committed by the opposing team. Utilization of free throws, the good ones, will certainly contribute bigger points, considering that in its implementation, there should be no interference from defenders (Mateus et al., 2018). Individually, 8 out of 15 players have reached the percentage above the team average, and 7 others have not reached the average. (Rubiana, 2017) states the movement of free throw is Not just throwing the basketball but also includes the movement of positioning, directing, and trying the basketball to fall right on target, namely the basketball hoop. Free throws in a specific basketball game can be a determinant of the team achieving victory. The game time that runs in the last 4 and 2 minutes of the quarter often occurs fouls and causes the occurrence of free throws. The Bhayangkara Bea Cukai Jaya (BBJ) team must improve their capabilities in free throws.

Possession more often comes from missed shots. Offensive rebounds increase the team's chances of scoring points, and defensive Rebounds prevent opponents from creating points-scoring opportunities. Offensive Rebound allows the attacking team to get a second shooting opportunity, and the point chance is great (Wissel, 2011). Both types are Rebound. This is very important in maintaining or taking possession of the ball. The average total rebounds (TREB) created by the BBJ team can be categorized as "excellent", although there are still 11 players who perform Rebound below the team average.

Turnover is a condition of failed ball control that causes a loss of attacking opportunities. Average Numbers Turnovers The BBJ team can be categorized as "very good", 2.73 times. The number below average shows that 9 players managed to suppress the occurrence of Turnovers, So the team does not lose many attacking opportunities. The more successful attacking opportunities, the more chances to score points. A team with high field percentages is efficient inside the pitch, not making many turnovers, getting offensive rebounds, and making good shots (Oliver, D. 2004).

Basketball is a collective sport that puts the ball into the opponent's basket to score and prevents the opponent from getting the ball and scoring under specific rules (Liu et al., 2021). The game of basketball also requires individual skills. Individual skill is one of the essential things in basketball, but individual skills are not a certainty of victory. Some basketball events show that some basketball teams that have players with excellent individual skills can also lose. Performance Analysis through statistical

data in basketball games is needed to see the performance of athletes and basketball teams. In fact (Bezerra, 2023) has used match analysis data in determining the wins and losses of a basketball team.

The results of Performance Analysis through statistical data in basketball games confirm that coaches have a critical role in controlling variables in-game statistics and during matches. Performance analysis results through basketball game statistical data also consider the importance of the same variables during the game, confirming the idea of basketball specialists who point out the importance of statistical analysis of matches to avoid mistakes and achieve victory. Analysing Basketball game is the key to the success of a team in the goal of seeking a victory so that it can be input for coaches in evaluating and improving the training process (Salafi, 2022).

CONCLUSION

The Bhayangkara Bea Cukai Jaya (BBJ) team has good field goal percentage (FG%), free throw percentage (FT%) is not good, total rebounds (REB) are perfect, and turnovers (TOV) are delicious. The focus on improving the accuracy of 2-pointers, 3-pointers, and free throws must be applied in training by the players and the coaching team. In addition, minimizing the factors that trigger turnover also needs to be done during training to reduce the turnover percentage. The Bhayangkara Bea Cukai Jaya (BBJ) team needs to improve its basic technical training and cooperation when conducting competitions.

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