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ORIGINAL RESEARCH

DIFFERENCES IN OFFENSIVE ACTIONS BETWEEN TOP AND LAST TEAMS IN GREEK FIRST SOCCER DIVISION. A RETROSPECTIVE STUDY 1998-2008.

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Abstract

The aim of the present study was to compare offensive actions between top and last teams of Greek Soccer First Division in a retrospective analysis of ten latter seasons (1998-2008). Results presented that top teams, as expected, scored more goals and made more shots on target compared to last teams. Moreover, top teams made more shots both inside and outside penalty area compared to last teams but last teams presented more shots outside compared to inside penalty area shots. As far as, assists made concerned, top teams had greater number of assists made resulting in a goal or not. Retrospective analysis showed a goal scoring declination through years but an increment in shots made on target. Results pointed out top teams' technical and tactical maturity and their highest competence in individual actions. Top teams seem to have greater ability in scoring goals and create more scoring opportunities through smaller distance shots (inside penalty area) and assists.

Key Words: soccer, football, game performance, successful vs. unsuccessful teams.

Introduction

One of the football coach's assignments is the evaluation of his players by forming a large database with observation of the games. The study of physical abilities, technical skills and tactics enables the coach to collect and analyse information concerning the: i. development of the above skills during a single game, a whole season or a tournament, ii. competitive level of each player and the average level of the whole team and iii. competitive level of his team compared to that of opposite teams (Papadimitriou, Taxildaris, Alexopoulos, Mavromatis & Papas, 2001). By elaborating on the above information, coach will be able to evaluate each player's as well as team's actions in different field areas (defensive, medium and offensive area) and also to organize the tactical training of this team (Dufour, 1993).

Tactic in soccer plays an important role not only in team's performance but also in game's outcome. Lack of tactics and strategy is one of the basic reasons for of a team's bad performance (Ali, 1998). Offensive is a part of tactics which seems to play influential role in soccer matches. Many researches have centered their attention in offensive actions of the game since scoring a goal is the ultimate aim of soccer.

A useful method to identify the essential elements of the final success is to estimate the quality and quantity of technical and tactical actions performed by players of the winning and the defeated teams in direct competition (Szwarc, 2004). Thus, the aim of the present study was to compare offensive actions between top and last teams of Greek Soccer First Division in a retrospective analysis of ten latter seasons (1998-2008).

Methods

Overall, ten seasons (1998-99 until 2007-08) of Greek Soccer Division A were studied. Matches’ data were obtained from Galanis Sports Data online database (<http://www.galanissportsdata.com>). Galanis Sports Data was founded in 1984 and during the past decade the company has undertaken, on behalf of the Hellenic Football Federation, the official statistical coverage of all matches of the National Greek Soccer Division A Championship.

Specifically, offensive differences between top (first, second) and last (penult, last) teams were examined as far as:

1. goals scored,
2. shots on target: inside penalty area,
3. shots on target: outside penalty area,
4. assists that ended with goal scoring,
5. assists that ended without scoring a goals.

All data were analyzed using the statistical package for PC SPSS 14.0. (Lead Technologies Inc, USA). Descriptive statistical methods were used, such as average and standard deviation (SD). Non parametric chi-square analysis was used to determine the statistically significant differences and the level of significance was set at $p < 0.05$.

Results

As far as goal scoring concerned, results revealed that top teams scored more goals than last ones (Figure 1). However, there is an obvious decline in goals scored from top teams, thus the margin between top and last teams seems to reduce. First and second teams appear to have similar retrospective changes and so do penult and last teams. Statistical analysis showed that top teams scored significant more goals than last teams ($p < 0.05$) during the examinant periods.

As shown in Figure 2 there were differences in shots made between top and last teams. Top teams seem to make more shots than last teams, which is in accordance with the above goal scoring findings. However, there was not found retrospective differences between groups. When ratio between goals scored and shots made were taken into account, results showed that top teams needed half shots to score a goal (Table 1). Moreover, statistical analysis showed significant differences between average goal/shot ratio of top and last teams ($p < 0.05$).

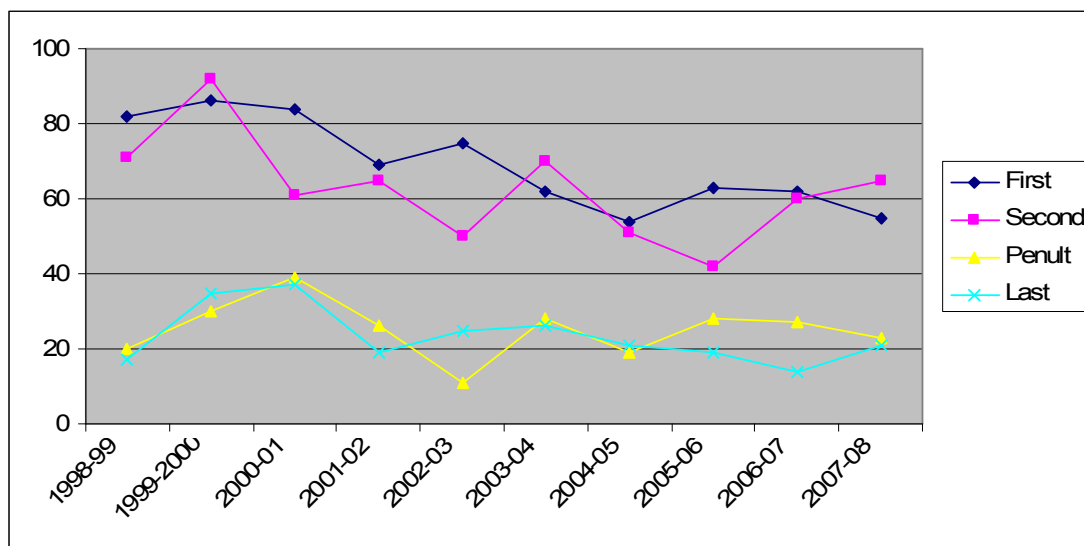


Figure 1: Differences in goals scored between top teams and last teams.

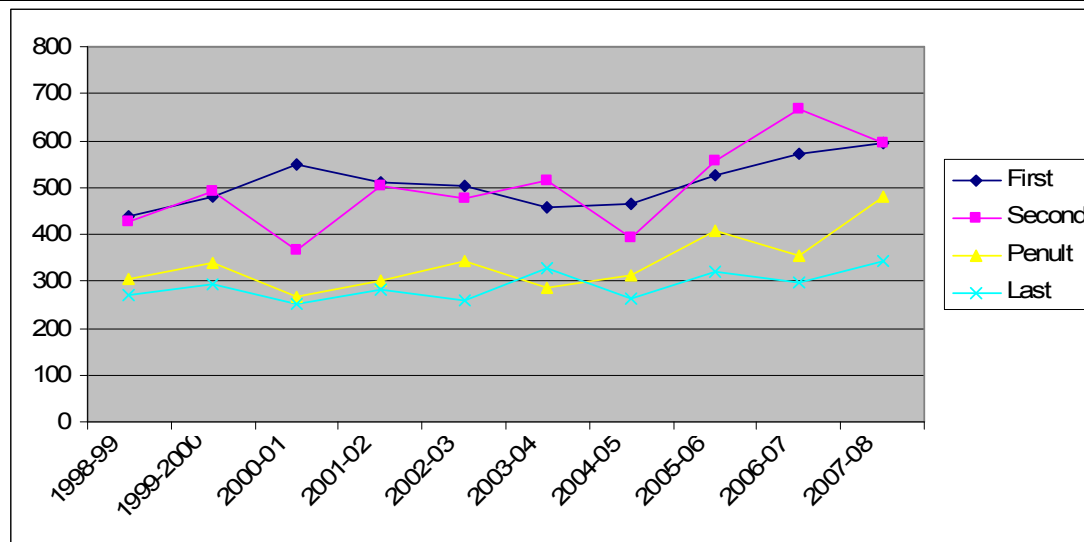


Figure 2: Differences in shots between top teams and last teams.

Table 1: Goal - shot ratio of top and last teams from 1998 until 2008.

	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Average
First	1 / 7	1 / 7	1 / 6	1 / 7	1 / 6	1 / 8	1 / 9	1 / 9	1 / 8	1 / 8	1 / 7.5
Second	1 / 8	1 / 7	1 / 9	1 / 6	1 / 10	1 / 7	1 / 10	1 / 9	1 / 8	1 / 7	1 / 8.1
Penult	1 / 24	1 / 12	1 / 10	1 / 12	1 / 26	1 / 12	1 / 16	1 / 9	1 / 13	1 / 13	1 / 14.7
Last	1 / 20	1 / 12	1 / 9	1 / 14	1 / 13	1 / 10	1 / 13	1 / 13	1 / 21	1 / 13	1 / 13.7

Further analysis of shots made appeared differences in shots made inside and outside penalty area (Figure 3). Moreover, top teams made more shots inside penalty area than last teams. Top teams presented a retrospective increase in shots inside penalty area while last teams presented a uniform distribution. As far as outside penalty area shots results were intricate (Figure 4). Although top teams made more shots outside penalty area, there was not found great difference between top and last teams. Likewise, from season 2005-06 both top and last teams presented an increase.

Average results comparing inside to outside penalty area shots revealed no differences for the first teams. Reversely, second teams presented a small difference between shots made inside and outside penalty area (195.7 vs 210.8). Last teams presented even greater difference (Table 2).

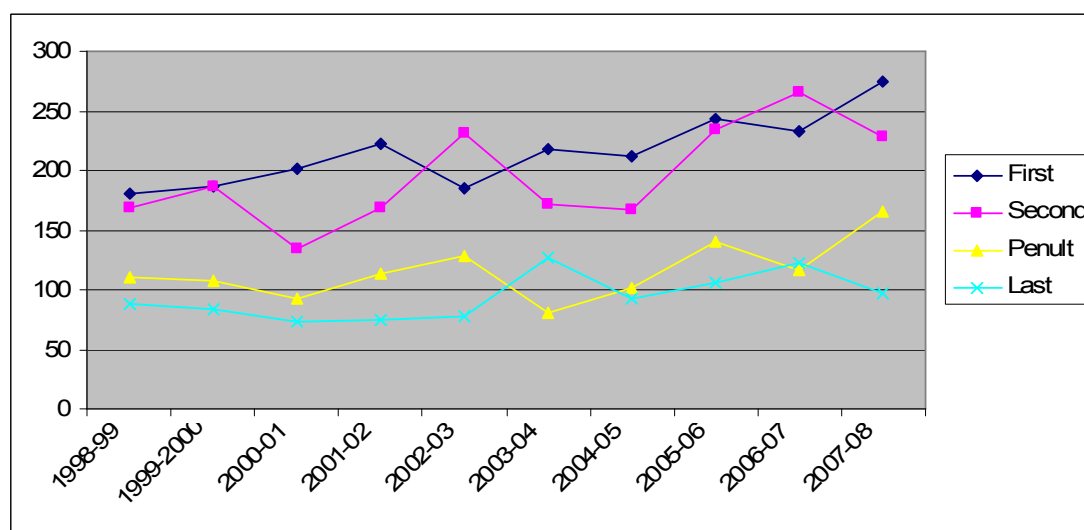


Figure 3: Differences in inside penalty area shots between top teams and last teams.

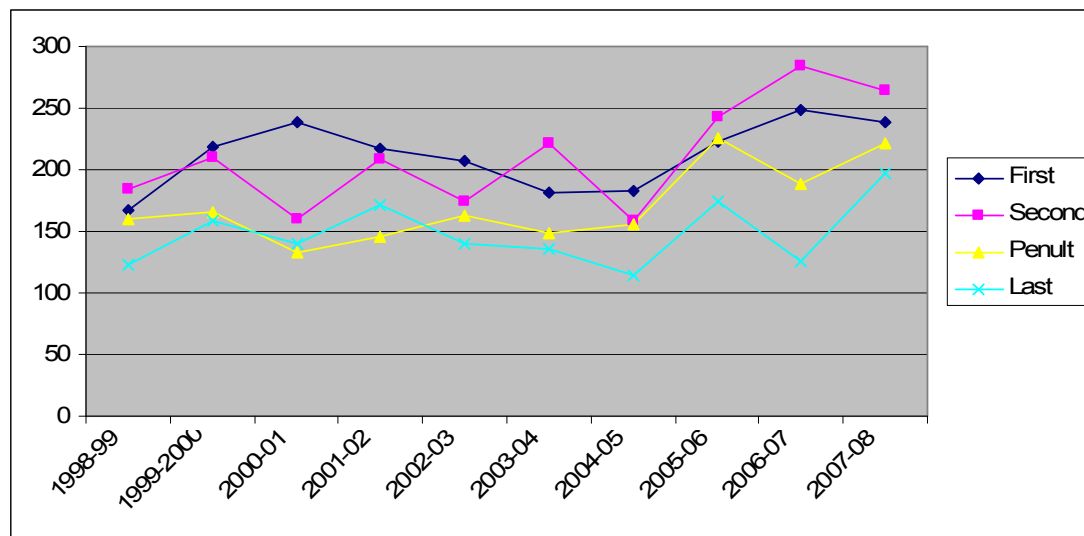


Figure 4: Differences in outside penalty area shots between top teams and last teams.

Table 2: Inside and outside penalty area shot average for top and last teams.

Teams		First	Second	Penult	Last	Average	SD ±
Shots	Inside penalty area	215.8	195.7	115.8	94	155.3	59.4
	Outside penalty area	212	210.8	170.8	147.9	185.3	31.4

As far as assists that was made concerned, results revealed that first and second teams presented twofold average towards penult and last teams as shown in Table 3 ($p < 0.05$). Moreover, assists that ended without scoring a goal presented similar results. Top teams presented greater number of assists in all seasons than last teams and their average was twofold greater ($p < 0.05$) (Table 4).

Table 3: Assists that ended with goal.

	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Average	SD ±
First	30	37	31	36	36	33	27	41	38	31	34	4.2
Second	30	37	22	29	25	48	35	29	45	35	33.5	8.2
Penult	7	14	8	12	5	14	16	17	12	14	11.9	3.9
Last	6	12	6	10	5	14	14	12	8	16	10.3	3.8

Table 4: Assists that ended without scoring a goal.

	1998-99	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	Average	SD ±
First	24	35	29	35	39	49	30	47	31	37	35,6	7,8
Second	36	44	36	20	19	17	39	31	30	33	30,5	9,1
Penult	18	28	16	9	15	10	13	17	17	25	16,8	5,9
Last	14	9	10	11	16	13	12	12	20	27	14,4	5,4

Discussion

Review showed that there is a lack in studies concerning Greek soccer and specifically Greek Soccer Division A. Moreover, there were found few researches that studied successful and unsuccessful teams in soccer leagues.

Results of the present study showed that top teams scored significant more goals than last teams. Retrospective analysis presented a decline in the number of goals scored by top teams. The first result was predictable since it is undoubted that successful teams score more goals than unsuccessful ones. The second result, as far as goals scored concerned, supports a widely thinking in soccer world that concerns margin reduction between strong and weak teams. Szwarc (2002) after examined 2002 World Cup concluded that the ratio of 2.58 goals per game placed top teams (Brazil and Germany) among the average achievements of all the teams that took part in the final tournament (161 goals in 64 games, average 2.52). Moreover, this is one of the lowest indices when compared to all the previous tournaments (Dufour, 1993; Grant et al., 1998; Loy, 1995). Moreover, same author presented that defeated teams scored in average 1 goal per two games. Thus, results seem to agree with previous studies as far as margin reduction in soccer.

As far as shots made, retrospective analysis showed a small increment in shots made both from top and last teams. Further, top teams, as expected, have made more shots compared to last teams. Szwarc (2002) reached similar results and concluded that finalist teams made more shots than unsuccessful teams (mean from 12 matches: 18.00 vs 14.08). Earlier studies have concluded that differences between the winning and the losing teams are mainly evident in the frequency and effectiveness of shots at goal and passing (Bergier, 1998; Grant et al., 1998; Przybylski, 1997). Results in goal/shot ratio revealed that top teams had twofold effectiveness in goal scoring. Hughes and Franks (2005) compared successful and unsuccessful teams in the 1990 World Cup. Results showed that there were differences between the two in converting possession into shots on goal, with the successful teams having the better ratios. Moreover, present results revealed that first team had lower goal/shot ratio compared to the second team, which may explain last league positions. Retrospective analysis did not showed any significant results since there was normal distribution in ratio through years.

Both inside and outside penalty area shots showed a slight increment for both top and last teams which is in agreement with total shots. Nevertheless, there is difference between number of shots made inside penalty area and outside penalty area for top and last teams. Further, last teams presented greater number of shots made outside penalty area compared to shots made inside the penalty area. This could be explained by the fact that successful teams can make more shots inside the penalty area because of their greater technical and tactical superiority. In reverse, last teams could not get close to goal area and so they made more shots outside the penalty area than did inside penalty area.

Results of assists presented that top teams have made a greater number of them whether resulting in a goal or not. First teams present equal number of assists/goal and assists/no goal, while second teams and last teams presented a greater number of assists/no goal. It is clear that first teams created more goal scoring opportunities than the rest teams and had greater effectiveness. Last team's greater number of no goal assists could be attributed to their quality of players.

Concluding, present study seems to be a useful measurement tool of Greek soccer which seemed to be absent from literature. Moreover, it is clear that compared to last teams, top teams showed a much higher effectiveness of a few game elements only that were studied. However, these very elements point to their technical and tactical maturity and the highest competence in individual actions. Top teams seem to have greater ability in scoring goals and create more scoring opportunities through smaller distance shots (inside penalty area) and assists.

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