

## WHO OWNS THE TELEVISION RIGHTS OF THE GAMES OF THE GREEK PROFESSIONAL FOOTBALL: THE GREEK PROFESSIONAL FOOTBALL CLUBS HIGHER MANAGEMENT APPROACH

Christos KOUTROUMANIDES<sup>1</sup>

Athanasios LAIOS<sup>1</sup>

John DOUVIS<sup>2</sup>

Panagiotis ALEXOPOULOS<sup>2</sup>

<sup>1</sup>Democritus University Of Thrace, Greece

<sup>2</sup>University of Peloponnese, Greece

**Key words:** Tv Rights, Soccer Club Manager.

### Abstract

Television rights in professional football in most European countries has, and still is, perhaps the most important and vital source of revenue for the professional football clubs. Much conversation and legislation was made to discuss, agree and regulate the ownership of the clubs' tv rights. This study examines the opinion of the higher management of the professional soccer clubs on the ownership of the clubs' tv rights. According to the results, most of the managers replied that the tv rights of the home games should belong to the clubs' league and the country's football association owns the rights. Also, they argue that the games gain value as part of the championship and if the games were carried out as individual events they would not have the same value. Finally the majority of the managers believe that the tv viewers face the championship as a single product.

### Introduction

Since football became professional and commercialized, the selling of the tv rights was put on the table for discussion. The tv scene in all European countries, became free starting from the 1980s until today, and that had much to do with the sharp increase in the professional football tv rights value in almost every European country and especially the most developed football – wise, such as England, Italy, France and Germany.

Professional football games coverage is premium tv program and is sold at a high price to the bidding media organizations. Consequently, these media organizations make more money than they spent, by selling advertisement to large companies that want to promote their product and services in the tv prime time of the pro football games coverage.

In the research “Financing Football – the New reality” (carried through by *PKF Accountants and Business Advisors in cooperation with Accountancy Age, 2003*), it is stated that “the more favorite the championship, the higher the tv rights revenues”.

In Greece, the clubs' tv rights exploitation mechanism became an issue in the early 1990s with the deliberation of the Greek tv scene (as happened some 10-15 years earlier in Italy, England, Germany and other more developed countries). Until that time, EPAE (the governing body of the Greek football championship) used to sell collectively the tv rights of the Greek football championship to ERT, the public broadcaster.

In the early 1990s, private tv stations started bidding to acquire the tv rights of the Greek football championship, but it was again the public broadcaster ERT that gained the collective tv rights of the Greek football championship. But in the auctions of 1995, it was Supersport, a private cable channel with subscription fee that bought the collective rights. For the following four years Supersport owned the rights and it was the year 1999 that the government passed a Law giving the clubs the right to sell their tv rights individually. This opened the door to Alpha media group that not only bought part of the games, but created the Alpha Digital, the first digital platform.

Unfortunately, Alpha Digital followed the same path with the other - and much bigger - digital platforms (like Leo Kirch group in Germany, ITV in England), which after skyrocketing

the tv rights value of the clubs, collapsed because they couldn't pay back to the clubs the fees they agreed on and were chased by the loan-providing banks.

After this generally considered "bubble", Greek clubs rights value sharply decreased to what is supposed to be their actual levels (most clubs rights' value still is the same or slightly changed until 2008) and the rights ended back to Supersport. Supersport eventually became just a channel in NOVA platform and other 8 Supersport channels were added, but still has the largest share of the tv coverage of the Greek football championship games.

Greek clubs still can sell their tv rights individually but they easily realized that the Greek football market and its particularities, lead them to collectively sell the rights to the highest bidder. That was the birth reason of the Superleague that is nowadays the governing body of the first professional division clubs body (that replaced EPAA after 27 years) in 2006. Olympiakos FC and Xanthi FC were the only clubs to follow their own path, selling their rights individually to the public ERT.

The Superleague agreement was that until 2008 all clubs that had running tv contracts with tv channels would continue to have them. But 2008 was the year all these contracts would end and the first collective tv contract would be signed by Superleague (representing all 14 clubs – except the 2 aforementioned ones) with the highest bidder. That was NOVA-Forthnet (that owns NOVA) along with tv station ΣKAI that bought the rights for 120 millions euros for 3 years.

The redistribution system of the tv income to the participating clubs is based upon factors like the position of the club in the standings, its market value, its stadium attendance and fans in general etc. Most clubs can gain more if they sell their rights individually

This study shows who the professional football clubs' higher management thinks must be the owner of the clubs' tv rights. Also demonstrates the major problems of the greek professional football, as they are evaluated by the clubs' higher management

#### *Literature Review*

While in Greece, studies in the area of professional football clubs tv rights are very rare, not to say do not exist, in Europe and especially in the football-wise developed countries such as England, Germany, France and Italy various studies examined the professional football tv rights selling mechanism. Many studies use the USA sports tv market as an example and comparison (since modern sports market as we know it was born and developed in the US that still influences the rest of the world).

In order to be able to understand the complicated issues of the competition, we must examine the parameter of the product unit. The "Product Unit" can be, and usually is identified with the club, a company that buys athletes in order to produce an outcome, the games. The organizational aspects that are necessary for the game, and the official recognition of the event, that adds value to it, in all the countries, led to the creation of the national and international federations (Alessandra Tonazzi, 2003)

Neale (1964) stated that "due to the special nature of the specific professional area, the traditional idea of the company, law-wise, is not the appropriate one in the team sports. Neale (1964) also states that "the product must not be defined as a game, but also the championship, the way to the championship and the discussion and press issues are parts of that". After that, he argued that the product depends on the predetermined agreements of all the clubs in a championship, in order for them to offer a series of same products (games) during the season, as part of an organized competition for the championship title.

According to the "Theory of Single Entity", the championships and the federations are considered to be a single financial unit, and as a result of that, the limitations they enforce to their members, e.g. concerning the tv rights negotiations, are acceptable and they do not violate the competition right.

Those who stand against this belief, argue that each club is autonomous, and can, with determined prices, to commercialize the product, and acquire inputs in a competition with other clubs. The fact that the European championships are "open", through a relegation-delegation mechanism, makes difficult for them to be considered as single championships in a financial basis. (Alessandra Tonazzi, 2003). The championships must be considered as common

companies, and their activities should be analysed with the rule of reason. Writers argue that the rule of reasonable analysis should apply only to the rules and limitations that are in favor to the competition, in a previous phase, but is possible ineffective in an after the result phase.

The key point for the competition authorities to check if a selling procedure is not competitive and thus legal, is to define the level in which the rights should be sold. The rights should be sold to the lowest level, that for team sports, is the individual game. However, the transactions cost, e.g. the time and cost of the professional and managerial actions make difficult the separation. The events should be sold to the lowest level or the lowest level where the selling is feasible, based on the transaction costs and the time limitations, whichever is higher (*Cowie και Williams, 1997*)

### **Material and method**

#### *Description of questionnaire – data*

For the data collection a questionnaire was used. The questionnaire used in the present research mainly includes closed-type questions. The questionnaire is divided in fourteen parts. The first part poses general questions to the participants about the club in which the work and the general conditions of the Greek professional football. In this first part, also questions about the Greek professional football's problems were asked to the club managers. The second part consists of questions about the ownership of the clubs' home game tv rights. In the third part the participants are asked upon the "product" and the way the tv viewers and the fans in general view the championship and the individual games. The fourth part deals with the supply and demand of the "product" and the number of the games with tv coverage. In the fifth part, the club managers are asked on the cost and the profit of the selling mechanism, while in the sixth part the issue is the competitive balance of the championship. The seventh part is a clubs' talent investment topic and the eighth part questions the number of the club – members in the professional football league. In the ninth part, the club managers are asked on the factors influencing the clubs' decision on the selling mechanism choice (such as stadium attendance, tv households accessibility etc). The tenth part consists of questions about the clubs' tv revenues and their distribution to the clubs, while the eleventh part deals with regulations and competition policies. Finally in the last part the club managers' answer on personal data questions (sociodemographic questions).

The sample for this study was 65 club managers of the 34 Greek professional football clubs that were associated with the clubs during the 2009–2010 football season, in the first two divisions (Superleague and Second Division), that are covered by Greek tv station. The number of the clubs of interest is limited, while accordingly limited is the number of the club managers that could answer on the questions this study poses. Specifically one to two or maximum three managers in each club could help in the goal of this study. That is because the football clubs have a limited number of staff and the higher management is even more limited (in general lines a professional football clubs has 5-10 employees out of which only the general manager and perhaps the marketing-commercial manager participates in the decision making). The number of managers that participated can be easily characterized as a quite large number for this type of study.

Of course, in the whole procedure the point of view and the will of the owner of the club is the most crucial and determining for the final outcome. The general managers of the clubs support and make public this point of view. So this study, interviewing the general managers and the marketing-commercial managers of the clubs, in essence shows how the owners and real decision makers think and act about the tv rights selling model in Greek professional football.

### **Results**

#### *Descriptive Analysis of the Data*

The present article investigates the views and opinions of Greek's Superleague and Second Division Club managers, by analyzing their responses on a series of general questions about their club and questions about the tv rights selling mechanism.

The results of this study are revealing and quite interesting. One can realize, according to the club managers' answers that the majority see the collective selling mechanism as a medium

to good tool to gain income from their tv rights, while individual selling of the clubs’ tv rights increase the individual income of each club.

Furthermore, the club managers believe that the tv rights of the games should belong to the professional football governing bodies that are the Greek Football Federation, Superleague (for first division) and EPAA (2<sup>nd</sup> and 3<sup>rd</sup> division).

They also think that, from the fans’ perspective, the whole professional football championship is by itself an entity and not a summation of individual games. This simply means that if a game between two clubs of the championship, was not part of the official championship, then the game would not have the same interest for the fans, since its result would not define the two clubs’ position in the standings of the championship and their chance to win the championship.

They additionally believe that fans should pay a subscription or some other kind of payment to watch their clubs’ games

Specifically, 47,7% of the managers stated that the tv rights of the home games belong to the football federation and 43,1% of them think that the clubs’ league owns the rights. Moreover, 80% of the them believe the tv viewers face the championship as a single product and 73,8% of them stated that the games gain value as part of the championship. Finally, 75,4% of the managers argue that if the games were carried out as individual events, they would not have the same value and 75,4% of them also think that the tv viewers do not face the championship games as substitute products

As regards the major problems of which the Greek football is currently suffering from, we have attempted to come up with a ranking by the Greek football’s managers, by asking them to evaluate a series of problems. The questionnaire includes ten questions about the major problems of the Greek football, such as the clubs’ finances, the reliability of the games outcome (referees), the football stadiums conditions, the training grounds condition, the quality of the academies football players, the quality of the foreign football players, the competition with other sports, the involvement in the club management of people with no experience in this professional area, the fans’ violence, and the indifference of the State. The respondents were asked to evaluate the specific problems by selecting between five possible answers, ranging from “very small problem” (1) to “very large problem” (5). The means of the sample’s responses on the ten questions range between 2.66 and 3.03.

As one observes from the following Table (Table 1), the managers rank as most significant problem the lack of suitable training grounds. The next highest mean value, 3, occurs on question that states the indifference of the State. Lower one can see that the managers value with 2,98 the lack of quality of the foreign football players and the involvement in the club management of people with no experience in this professional area, with 2,97 the bad football stadiums condition, with 2,94 the lack of qualitative academies football players and the fans’ violence, with 2,8 the unreliability of the games outcome (referees) and with 2,75 the clubs’ bad finances. As the less important problem by the managers is regarded the problem of competition with the other sports, indicating thus the domination of the football in Greek sports scene, with a mean of 2.66.

Table 1: Most significant problems in the Greek football

Most significant problems in the Greek football	N	Minimum	Maximum	Mean	Std. Deviation
Training grounds condition	65	2	4	3,03	0,77
Indifference of the State	65	2	5	3	0,729
Quality of the foreign football players	65	2	4	2,98	0,545
Involvement in the club management of people with no experience in this professional area	65	1	5	2,98	0,82
The football stadiums conditions	65	2	4	2,97	0,637

Quality of the academies football players	65	2	4	2,94	0,726
Fans' violence	65	2	5	2,94	0,704
Reliability of the games outcome (referees)	65	2	5	2,8	0,775
Clubs' finances	65	2	5	2,75	0,708
Competition with other sports	65	1	4	2,66	0,735

*Statistical Analysis Conducted*

Besides the descriptive analysis of single items from the questionnaire, the qualitative variables of the questionnaire were additionally analysed by utilizing suitable statistical methodology - such as principal components analysis (PCA), cluster analysis – in order to identify relevant sets of variables and establish a series of factorial (latent) variables that summarise and explain a large proportion of the variability of the observed variables, and logistic regression analysis for attempting to identify most significant factors for affecting managers' preference towards one of the two selling mechanisms.

In particular, in the next section we perform principal component analysis (PCA) to search and quantify the dimensions supposed to underline the problems associated with the Greek football, as evaluated by the managers. As an initial input for the analysis a total of 10 variables expressing the Superleague managers' opinions on the basic problems' of Professional football were used. The data analysis was carried out with the help of the statistical package SPSS.

*PCA Analysis*

With PCA one can compress large data-sets keeping all the useful information. In order for this to be accomplished, the original data are re-expressed as a linear combination of its basis vectors, by rotating them so that the maximum variability is visible.

We employ a PCA model in order to try to identify a relatively small number of factors that represent relationships among the most significant problems in Greek football as stated by the clubs' managers. With PCA we summarize the Superleague managers' opinions on the basic problems' of Professional football total variability, consisting of many factors, using a scheme of less factors, that has however the basic qualities.

These problems are the clubs' finances, the reliability of the games outcome (referees), the football stadiums conditions, the training grounds condition, the quality of the academies football players, the quality of the foreign football players, the competition with other sports, the involvement in the club management of people with no experience in this professional area, the fans' violence, and the indifference of the State.

Specifically, with the method of the main principal components we processed the data that resulted from the items of the questionnaires related to the most significant problems of the Greek football that were given to the club managers of the professional football clubs of the Superleague and B Ethniki in Greece. From the analysis of the aforementioned methodology, four main components were created based on the associations between the ten questions asked to the managers.

In the following Table (Table 2), we see the proportion of the variance of each initial variable that the constructed PCA explains. As we observe, the four principal components explain the 64.3% of the total variability of the ten input variables. In order to interpret the factors better, the rotation of the factors is conducted. More specifically, we have used the orthogonal transformation process called varimax. The objective is to simplify the factor structure and make the results more meaningful.

Table 2: Results of the PCA model

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2,484	24,836	24,836	2,313	23,131	23,131
2	1,430	14,301	39,137	1,514	15,145	38,276
3	1,328	13,276	52,413	1,351	13,509	51,785
4	1,189	11,893	64,306	1,252	12,521	64,306
5	,927	9,266	73,572			
6	,727	7,268	80,840			
7	,604	6,045	86,885			
8	,531	5,308	92,193			
9	,477	4,766	96,958			
10	,304	3,042	100,000			

Extraction Method: Principal Component Analysis.

Specifically in the formation of the first component, we have the positive contribution of the following questions:

1. *Problems – Reliability in the outcome of the games (referees) with participation 0,822*
2. *Problems – Clubs' finances with participation 0,794*
3. *Problems – Indifference of the state with participation 0,527*

The first component shows “the negative attitude of the State and the bodies of professional football (*Greek Football Federation – Referees*) towards the all time problems of the professional football (*reliability – financial problems*)”.

In the formation of the second component, we have the following questions that contribute positively:

1. *Problems – Teams Training Facilities Condition with participation 0,588*
2. *Problems – Fans Violence in the Stadiums with participation 0,563* and as concerns the variables that contribute negatively we find the question *Problems – Foreign Players Quality with participation - 0,729*.

The second component shows “the negative correlation that develops between the basic facilities infrastructure of professional football and the violence in the Greek stadiums with the foreign players quality that professional football attracts”.

In the formation of the third principal component, we have the positive contribution of the question: *Problems – Football Stadiums Conditions* with participation 0,755, whereas in the variables that contribute negatively we find the question *Problems – quality of players coming from the academies* with participation - 0,709.

The third component shows “the negative correlation that develops between the professional football stadiums' conditions and the quality of the players coming from the academies into professional football”.

Finally in the formation of the fourth component, we have the positive contribution of the question: *Problems – Competition with other sports* with participation 0,755 and the negative contribution of the question *Involvement of people with no professional experience in this area in clubs' management* with participation -0,709.

The fourth component shows “the negative correlation between the competition with other sports and involvement of people with no professional experience in this area in clubs' management”.

#### *Cluster Analysis*

Moreover, in order to see if natural and useful clusters of data exist, we used alternatively cluster analysis, that was performed utilizing the technique of hierarchical cluster analysis. Essentially, starting with each observation being a group by itself, in every step we unite the

observations that have the smaller distance, so that the data of a formulated cluster be part of the elements of the hierarchically next (Siardos, 1999; Karlis, 2005). It can work not only towards the clustering of observations, but towards the clustering of variables too (Siardos, 1999).

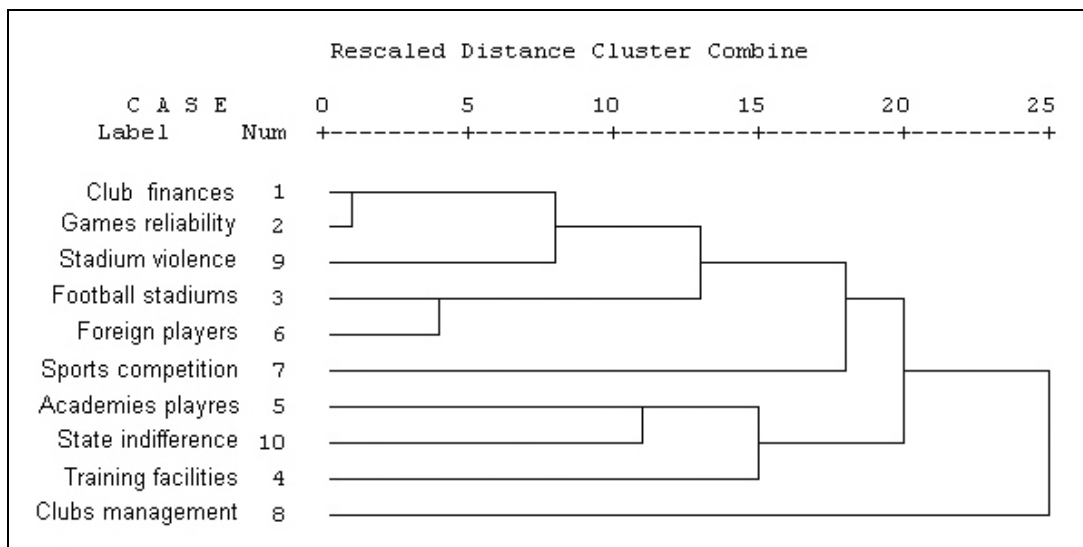
Since the analysis unit is variable, we calculate the distance or similarity measures for all variables' pairs. As a distance unit, we used the Euclidean distance and as method of combination of the observations in clusters we used the method of "furthest neighbour". According to this method, as a distance between two clusters we take that of further points (Bartholomew et. al., 2002).

With the hierarchical cluster analysis, we have obtained three clusters of variables, of a structure which become obvious with the help of the complete linkage (Table 3) and the dendrogram of the variables (Figure 10). As we see, the problems "clubs' finances" are closely linked with the "reliability in the outcome of the games (referees)" and in a longer distance with "the fans' violence in the stadiums". The "football stadiums' conditions" and the "foreign players' quality" are linked with each other before they link with the aforementioned problems. Finally, the variable problems "competition with other sports" that concludes the first cluster can be characterized as "business type football problems". The second cluster with the identity "sport development football problems" includes the variables "quality of football players coming from the academies", "indifference of the State" "teams' training facilities condition". From the above it's obvious that the participants think that the participation of the State is necessary in the sport's development and less in professional football championship. The variable that refers to the involvement of people with no professional experience in this area in clubs' management is by itself the third cluster.

Table 3: Complete linkage of variable and clusters for the problems of Greek professional football.

Stage	Cluster Combined		Coefficient	Stage Cluster First Appears		Next Stage
	1st Cluster	2nd Cluster		1st Cluster	2nd Cluster	
1	1	2	5,385	0	0	3
2	3	6	6,083	0	0	5
3	1	9	6,782	1	0	5
4	5	10	7,211	0	0	6
5	1	3	7,681	3	2	7
6	4	5	8,000	0	4	8
7	1	7	8,426	5	0	8
8	1	4	8,832	7	6	9
9	1	8	9,849	8	0	0

Figure 1: Dendrogram of the variables of the Greek football problems.



With the hierarchical analysis in clusters for the problems of the Greek football, we created two clusters with the following identities “business type football problems” and “football problems - involvement of people with no professional experience in this area in clubs’ management”. The first cluster mostly deals with the problems most fans think professional football has, and are the main reason of low stadium attendance, low tv viewership, low spending in clubs’ merchandising, etc. Also includes “the competition of the sports”, showing that unhappy fans (mostly the not dedicated ones) may turn to other sports viewing and attending.

The second cluster has more to do with the “structural” problems of professional football, that is the lack of programming and infrastructure in the academies and the training grounds that leads to the lack of well-trained young and professional players, leading to low level spectacle on the field. This is a major reason for the fans to turn their backs to their clubs and professional football in general.

#### *Pearson’s chi-square tests of independence*

In this section, the qualitative variables of the questionnaire were related by means of the chi-square test (*Mendenhall, 1979*) to the variable that concerns the evaluation of the collective selling model, in order to attempt to detect any possible factors that could have an association with the preference of managers towards one or the other selling mechanism. In addition, the contingency coefficient (CC) for each statistically significant comparison was calculated in order to determine the strength of the association. In the sequel, the results of the analysis are presented. We present both statistically and non-statistically significant results of the chi-square tests conducted, in order to associate preference towards the collective selling model and the other items of the questionnaire

In the null hypothesis  $H_0$  = there is no difference between the variables “the tv viewer sees the championship as” and “the games gain value as part of the national soccer championship”, the Pearson’s  $X^2$  is 28,756 with 1 degree of freedom and the correlation is statistically significant at a 1% level of significance (p-value <0.01). This shows that there is a strong correlation between the two variables. The phi coefficient is 0.665 (positive) and the correlation between the variables is statistically significant (p-value <0.01). The Gramer’s V coefficient is 0.665, and the correlation is statistically significant (p-value <0.01). The coefficient of contingency is 0.554 and the correlation between the variables is statistically significant at a 1% level of significance (p-value <0.01).

Most of the managers that stated that the tv viewers think the championship as a single product, they also believe that the games gain value as part of the championship.

In the null hypothesis  $H_0$  = there is no difference between the variables “the tv viewers face the championship as” and “if the games were carried out by the clubs as individual events”, the Pearson’s  $X^2$  is 31,526 with 1 degree of freedom and the correlation is statistically significant at the 1% level of significance. This shows that there is a strong correlation between the two variables. The phi coefficient is -0.696 (negative) and the correlation between the variables is statistically significant (p-value <0.01). The Gramer’s V coefficient is 0.696, and the correlation is statistically significant (p-value <0.01). the coefficient of contingency is 0.571 and the correlation between the variables is statistically significant (p-value <0.01).

It is obvious that the majority of the managers that believe that the tv viewers see the championship as a single product, also believe that if the games were carried out by the clubs as individual events, they would not have the same value.

There is a strong correlation between the variables: “To whom should belong the home games tv rights” and “Evaluation of the tv rights collective selling model”, since the Pearson’s  $X^2$  is 3.97 and the correlation is statistically significant at the 1%. Level of significance (p-value <0.001).

The managers’ majority thinks that the home games tv rights belong to the clubs’ league or the football federation, while at the same time evaluates the tv rights collective selling as bad-medium. Indeed, the tv rights are exploited by the clubs’ league and not the clubs themselves,



satisfying most of the managers. The negative evaluation of the collective selling model in both cases (when the rights belong to the federation or the league), points out most probably the unsatisfactory revenues the clubs get through the current model.

*A Logistic Regression Model to Explain the Preference of Greek Managers Towards the Collective Selling or Individually Selling tv Rights*

*Short Description of methodology used*

To identify those factors that influence statistically significantly the opinion of Greek managers on the most suitable - according to their own perspective - Greek professional football tv rights selling mechanism, we have chosen to fit a logistic regression model to the data collected (Agresti, 2002).

Specifically, the dependent variable chosen is the evaluation of the respondents on the tv rights mechanism currently applied today in Greek football, that is the collective mechanism. During the interviews, managers were asked the following question: "Evaluate the tv rights income redistribution model of the current collective selling". The respondent had to pick one answer from a five possible answers, namely: "Very bad", "Bad", "Medium", "Good" and "Very good". For modeling the categorical response, we have surprised the five possible answers to two categories (1: very bad - medium, 2: good-very good).

Further, we have chosen for the initial fit of the logistic regression model as predictor variables various possible factors. Specifically, the variables included in the model were: "Who must own the home games tv rights?", "The maximization of the total profits of the clubs leads to the maximization of the profits of each club separately?", "The current selling model of your tv rights has increased, decreased or left unchanged the tv ratings of your games?", "The current selling model of your tv rights has increased, decreased or left unchanged the accessibility of the tv households to the broadcast of your games?", "The current selling model of your tv rights has increased, decreased or left unchanged your stadium attendance?", "The current selling model of your tv rights has increased, decreased or left unchanged your financial strength and your ability to acquire talented players?", "With the current selling model of your tv rights your revenues, comparing to their real value, have increased, decreased or left unchanged?" and "What percentage of your club's income represents the money received from television rights?".

The binomial distribution was specified as the appropriate error distribution, whereas the logit was used as the model's link function.

A full description of the predictor variables can be found in the Appendix B.

In the previously described logistic regression model, we have designated the positive evaluation on behalf of the managers of the collective selling mechanism (i.e., "good-very good" category) as predicted group for the dependent variable, while as a reference category we have chosen the negative category of answers "very bad-medium". For the adaptation of the final model and the calculation of beta coefficients we used the method of maximum likelihood.

The following table shows the values of the coefficients of independent variables in the logistic model accompanied by the statistical significance of coefficients, derived by the Wald type test. In the last column, the odds ratios of the model are presented for each one of the predictor variables separately.

Table 4: Parameter Significance Tests (Reference Group: "very bad - medium")			
Parameter	Beta coefficient	p-value	Odds Ratio (exp(B))
Intercept	-0.327	n.s.	
<b>Collective selling model and stadium attendance</b> (ref.: left unchanged)			
Increased positively	-1.537	0.054*	0.215
<b>Collective selling model and accessibility of the tv households to the broadcast of games</b> (ref.: left unchanged)			
Increased positively	-1.623	0.053*	0.197
<b>Maximization of the total profits of the clubs and maximization of the profits of each club</b>			

<b><i>separately (ref.: very much)</i></b>			
A Little	18,307	n.s.	
Moderately	17,747	n.s.	
Enough	40,153	n.s.	
Much	-2,194	n.s.	
<b><i>Collective selling model and the tv ratings of games (Ref.: left unchanged)</i></b>			
Increased positively	0.768	n.s.	
<b><i>Collective selling model and financial strength/ ability to acquire talented players (Ref.: left unchanged)</i></b>			
Increased positively	-1.961	0.112****	0.141
<b><i>Percentage of Clubs income and tv rights (ref.: 41%-60%)</i></b>			
21%-40%	-1.137	n.s.	
<b><i>Collective selling model and club's revenues (ref.: increased)</i></b>			
Decreased	4,077	0.02**	58,997
Left unchanged	4,815	0.004***	123,304
<b><i>Who must own the home games tv rights (Ref.: Football Federation)</i></b>			
Both teams	1,661	n.s.	
Clubs' League	1,481	n.s.	
-2 Log likelihood	55.961		
Nagelkerke R Square	0.488		
Cox & Snell R Square	0.355		

*Dependent Variable:* Evaluation of the tv rights income redistribution model of the current collective selling.

\*: Coefficient is significant at a 10% significance level; \*\*: Coefficient is significant at a 5% significance level; \*\*\*: Coefficient is significant at a 1% significance level; \*\*\*\*: Coefficient is significant at a 20% significance level  
n.s.: Non-significant

As it follows from the inspection of Table 3, the accessibility of the tv households to the broadcast of the games is a significant factor for the preference of collective selling mechanism, at a 10% level of significance since that those who reported an increase in the accessibility of the households seem to have lower probability to choose the collective selling mechanism from those reporting the broadcast of games to be left unchanged (beta=-1.623, p-value=0.053<0.1). Indeed, as suggested by the model, the probabilities (odds) of a manager being in a club that has increased the broadcast of its games to the tv households to be in favor of the collective selling is decreased by a factor of 0.197, when compared with the managers who reported that the accessibility is left unchanged.

Accordingly, managers whose team has increased the stadium attendance with the utilization of the collective selling are less in favor of the current mechanism, when compared with the managers whose team has left unchanged its stadium attendance (beta=-1.537, p-value=0.054<0.1).

The most significant factor, however, in predicting the dependent variable in the final model is the club's revenues. As indicated by the model, the probabilities (odds) of a manager to be in favor of the collective selling model, being in a club that has decreased or left unchanged its revenues with the utilization of the collective selling mechanism is decreased by a factor of 58.997 and 123.304, respectively, when compared with the managers who reported that the club's revenues have increased. (beta=4.077, p-value=0.02<0.05 and beta=4.815, p-value=0.004<0.01).

Also, as derived from the interpretation of the model, the other remaining factors under investigation were not found to be statistically significant predictors of the respond variable.

Finally, while there was not a statistically significant result at a 5% level of significance (only moderately statistical significance at a 20% level), a negative result concerning association

of financial ability of the club, and the ability to acquire talented players and the positive preference of managers to the collective selling model was detected by the results of the logistic regression model ( $\beta = -1.961$ ,  $p\text{-value} = 0.112$ ).

As concerns the model's adequacy, the chi-square value of the model (28.513,  $p\text{-value} = 0.008 < 0.05$ ) indicates that logistic regression is very meaningful, at the 5% level of significance. The Nagelkerke's pseudo-R was 0.488, and Cox and Snell R-square 0.355. Finally, the model proved to exhibit a good predicting power, since the prediction accuracy derived by the classification table was 76.9%.

Tv rights exploitation is a relatively new topic in Greece both in the professional and the Academic area, since the public tv (ERT) monopoly ended just in 1995.

Mostly in the football-wise developed countries, researchers carried out analyses on the optimal tv rights selling mechanism of the clubs, with most of these studies examining the football markets of England, Germany, Italy and France.

In order to deeply understand the reasons that right now exists a combination of collective-individual selling of the clubs' tv rights in the Greek football, we must understand the particularities of the Greek football market.

Στην έρευνα «Χρηματοδοτώντας το Ποδόσφαιρο – Η Νέα Πραγματικότητα» (2003), τα στελέχη των σ In the “Financing football – the new reality: A survey of English and Scottish Premier League and English First Division club finance directors” (2003), the club managers when asked if they think that there must be an individual selling rather than a collective one, for the Premiership and Championship they answered an amazing 100%. Furthermore, when it came to evaluate the tv income distribution system, 90% of Premierleague clubs thought it is acceptable because they received substantial guaranteed payments. In our study only 34,3% of the club managers thought the current collective selling model to be good or very good. The same clubs' managers, in the question “if the tv rights individual exploitation increase the home game stadium attendance” answer yes with a rate of 73,8% and in the question “if the tv rights individual exploitation increase clubs' income from the tv rights selling” answer yes with 58,5%. This clearly shows a preference of the managers for their clubs to individually exploit their tv rights. As our analysis showed, managers that are mostly in favor of the individual selling mechanism, are those whose team has been underestimated its revenues compared to their real value.

The statistical analysis has shown that the managers that stand in favor of the collective selling model, state that:

- The tv rights of the home games should belong to the professional clubs' league (47,7%), and the country's football federation (43,1%)
- The games gain value as part of the national soccer championship, (73,8%)
- If the games were carried out as individual events, they would not have the same value (75,4%)
- The tv viewers face the championship as a single product (80%)
- The tv viewers face the championship games as substitute products (24,6%) and as additional products (75,4%)

From the in depth analysis of the findings in the previous chapters, it is clear the general belief among the Greek football experts that even though the collective selling model is the optimal one, the income redistribution system creates large discrepancies between the club revenues and thus the general competitiveness of the championship. They agree in the way the rights are sold, but they seek a more fair way to share the profits, especially the weak clubs.

The Greek football market is characterized by its small size (population of only 11 millions while the football wise developed countries has populations of 70-100 millions), few good clubs, general lack of public and private funding, lack of modern and practical facilities and violence.

All the aforementioned factors (and especially the population size, because less fans equals to less attendants in the stadiums, less buyers of sports tv packages, less consumers of the clubs' sponsors and advertised firms' products and services etc) keep the market value of the clubs tv rights and the clubs' overall value low.

In this “hostile” environment the Greek clubs have the choice to unite (like English Premiership clubs) or act individually (like the Italian Calcio clubs).

The Greek clubs chose the solution in the middle forming a combination of individual selling (Olympiakos and Xanthi that sold their rights to public broadcaster ERT) and collective selling (the rest 14 clubs that sold their rights to cable platform with subscription fee NOVA).

Even if the five big clubs (Olympiakos, Panathinaikos, AEK, PAOK, ARIS) can gain more income from the individual selling of their tv rights, the negative effects to the overall football system is much more intense through the weakening of the rest of the clubs (that cannot find a media organization to sell their rights, or in the best chance for them, they can sell them with less the money they could gain through a collective selling mechanism). The lack of competitive balance creates a 2-3 gears championship with not much anticipation for the final winner and this lack of fans’ interest results to lower overall profits for the clubs (stadium attendances, merchandising, sponsorships, advertisements, licensing, etc).

### **Conclusions**

Based on the findings of the current study, relative studies that were carried out in other European countries, and of course the particularities of the Greek professional football market we could suggest that the optimal clubs tv rights’ selling mechanism is collective selling through the governing bodies of Greek professional football (either the Greek Football Federation or the Superleague/EPAE).

The findings of this study clearly show that the clubs’ managers recognize the need for all the clubs to collectively exploit their tv rights by stating that the games of a championship gain value as part of it and that the tv viewers see the championship as a unity, a product by itself. Mostly it can be concluded by their statement that the Greek football federation or the football leagues own the clubs’ tv rights and must exploit them. On the other hand they see individual selling as a more appropriate model to sell their rights, since in that way they increase their tv income and their stadium attendance. The combination of the two aforementioned contradictory findings, can lead to the conclusion that firstly the club managers think that collective selling is the optimal theoretical model to sell their tv rights, but the way it is currently implemented is not the optimal one, leading to lower results in both income and stadium attendance than the ones anticipated by the managers. Nevertheless, the need of the collective selling is recognized by the managers and by the Greek football reality itself since this model is the model that for many years and still now (that Greek professional football clubs have gain much professional experience by participating in European tournaments and interacting with renown foreign football clubs) Greek football chooses to apply.

The small size of the Greek football market and its “hostile” environment to the average fan-“client” make this necessity more intense than ever before.

The current system’s partial failure can be fixed through designing and implementing a more “fair” tv income redistribution model, that is enhancing the weaker teams (it is difficult though to implement a US-like model that equally distributes the tv income to all the clubs of the league – that is because the whole sport’s theory and concept in USA is totally different than the European one). If weaker teams take more income, then they can afford to acquire better players and create a more competitive squad, leading that way to a more balanced championship, with more uncertain results. And this uncertainty is the key to a league success, through the increase in the fans’ interest, that is interpreted in higher tv ratings, stadium standings, spending in football product.

### **Bibliography:**

1. AGRESTI, A. (2002). *Categorical Data Analysis*. New York: Wiley-Interscience.
2. BARTHOLOMEW, D., STEELE, F., MOUSTAKI, I. & GALBRAITH J. (2002). *The Analysis and Interpretation of Multivariate Data for Social Scientists*. Chapman and Hall
3. COWIE, C. & WILLIAMS, M. (1997). *The economics of sports right. Telecommunications Policy*, Vol. 21, No. 7, pp. 619~634
4. KARLIS, D. (2005). *Multivariable Statistical Analysis*. Athens. Ath. Stamoulis

Publications.

5. MENDENHALL, W. (1979). *Introduction to Probability and Statistics. Fifth Edition.* Duxbury Press
6. PKF Accountants & Business Advisors in cooperation with Accountancy Age (2003). *Financing Football – the New reality.*
7. Siardos, G.K. (1999). *Methods of Multivariable Statistical Analysis. Part I. Research of Relations Between Variables.* Thessaloniki. Ziti Publications.
8. TONAZZI, A. (2003). *Competition policy and the commercialization of sport broadcasting rights: the decision of the Italian Competition Authority* Int. J. of the Economics of Business, Vol. 10, No. 1, 2003, pp. 17–34
9. TSANTAS, N., MOISIADIS, C., BAGIATIS N. & CHATZIPANTELIS T., (1999). *Data Analysis with the help of Statistical Packages.* Ziti Publications

**APPENDIX A**

**Contingency Table A1:** The games gain value as part of the national soccer championship & The tv viewers face the championship as:

		The tv viewers face the championship as		Total
		A single product	A sum of individual games	
The games gain value as part of the national soccer championship	Yes	46 95,80%	2 4,20%	48 100%
	No	6 35,30%	11 64,70%	17 100%
Total		52 80,00%	13 20,00%	65 100%

Chi-square: 28,756, p-value<0.001; Phi coefficient: 0.665, p-value<0.001; Cramer’s V: 0.665, p-value<0.001; CC: 0.554, p-value<0.001)

**Contingency Table A2:** If the games were carried out by the clubs as individual events, they would have the same value & The tv viewers face the championship as:

		The tv viewers face the championship as		Total
		A single product	A sum of individual games	
If the games were carried out by the clubs as individual events, they would have the same value	Yes	5 31,30%	11 68,80%	16 100%
	No	47 95,90%	2 4,10%	49 100%
Total		52 80,00%	13 20,00%	65 100%

Chi-square: 31,526, p-value<0.001; Phi coefficient: - 0.696, p-value<0.001; Cramer’s V: 0.6965, p-value<0.001; CC: 0.571, p-value<0.001)

**Contingency Table A3.** To whom should the tv rights belong & Evaluation of the tv rights collective selling model

		Evaluation of the tv rights collective selling model		Total
		Good-Very good	Bad-Medium	
To whom should the tv rights belong	Home Team	2 100,00%	0 0,00%	2 100%
	Both Clubs	1	3	4

		25,00%	75,00%	100%
	<b>Clubs League</b>	11	20	31
		35,50%	64,50%	100%
	<b>Football Federation</b>	9	19	28
		32,10%	67,90%	100%
	<b>Total</b>	23	42	65
		35,40%	64,60%	100%

Chi-square: 3,970 p-value<0.001; Phi coefficient: 0.247 p-value<0.001; Cramer's V: 0.247, p-value<0.001; CC: 0.240, p-value<0.001)

**APPENDIX B**

<i>Variables' operationalization</i>	
<i>Independent variables</i>	<i>Values</i>
<i>"Who must own the home games tv rights?"</i>	<i>Home Club (1) Both Clubs (2) Clubs League (3) Football Federation (4) Other (5)</i>
<i>"The maximization of the total profits of the clubs leads to the maximization of the profits of each club separately?"</i>	<i>Not at all (1) Scarcely(2) A little (3) Medium (4) Enough (5)</i>
<i>"The current selling model of your tv rights has increased, decreased or left unchanged the tv ratings of your games?"</i>	<i>Has increased (1) Has not changed (2) Has decreased (3)</i>
<i>"The current selling model of your tv rights has increased, decreased or left unchanged the accessibility of the tv households to the broadcast of your games?"</i>	<i>Has increased (1) Has not changed (2) Has decreased (3)</i>
<i>"The current selling model of your tv rights has increased, decreased or left unchanged your stadium attendance?"</i>	<i>Has increased (1) Has not changed (2) Has decreased (3)</i>
<i>"The current selling model of your tv rights has increased, decreased or left unchanged your financial strength and your ability to acquire talented players?"</i>	<i>Has increased (1) Has not changed (2) Has decreased (3)</i>
<i>"With the current selling model of your tv rights your revenues, comparing to their real value, are higher, the same or lower?"</i>	<i>Higher (1) Same (2) Lower (3)</i>
<i>"What percentage of your club's income represents the money received from television rights?"</i>	<i>0-20% (1) 21-40% (2) 41-60% (3) 61-80% (4) 81-100% (5)</i>