

**ECONOMIC AND FINANCIAL FACTORS:
A study in Brazil's football teams from 2009 to 2012¹**

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ABSTRACT

The football has cultural, social, economic, and even political, that the have been transformed into a mass sport and with significant influence in the daily lives of the Brazilian population. It can be stated that no other form of popular culture presents a participatory passion among his followers as they have for the game of football in Brazil. This study aimed to characterize, using Principal Components Analysis, 18 football teams and the dynamics of this process from 2009 to 2012, according to three economic and financial factors that were the Total Revenue, the Brand Value and the Indebtedness. The results showed that there is a consistency in relation to the posting of some football teams during the period analyzed, which enables to believe in a trend of efficient management of revenue and enhancing the brand in some teams and, on the other hand, difficulties to overcome long periods of indebtedness, in others.

Keywords: *football; economic and financial factors; Principal Components Analysis*

1. INTRODUCTION

Football is one of the main symbols of Brazil, as it that causes feelings of equality and passion, in addition to dispute, being able to join in a same objective individuals of all social strata. According to Damatta (1994), this relationship between people and football is so deep that many Brazilians are unaware that football was invented in England and believe that he, like the samba, is typically Brazilian product.

In the last decades, several changes have occurred in the environment of sports organizations, exerting influence on its management, and prominently in football, which has attracted new types of organizations, such as financial institutions and enterprises of sports marketing, passing to move significant monetary values. Thus, the deployment of the logic of the market allowed the insertion of elements of the business environment and its business in administration of sports organizations (GONÇALVES; CARVALHO, 2006).

Yet, according to these authors, the football came to be perceived as a business extremely profitable that, subject to the logic of the market, has become athletes in financial assets and fans in consumers.

The complexity of this structure can be translated by information available on the website (www.fifa.com) of the Fédération Internationale de Football Association (FIFA) that show that there are currently in Brazil, approximately 29.208 football clubs and 2.141.733 registered players. Other relevant numbers are presented in

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Portal 2014 (www.portal2014.org.br) as the number of professional games per year, which exceeds 5.000, the implementation of more than 100 competitions, annual, and the record of 61.000 arbitrators. In addition, the Confederação Brasileira de Futebol (CBF) – Brazilian Football Confederation – held in 2013 a national register of football stadiums where can be observed the existence of 739 stadiums for the practice of football throughout the Brazilian territory (www.cbf.com.br).

For this reason, it can be stated that the football, in fact, has become a big business. Thus, studies that focus on economic and financial management of the teams becomes essential to understand the changes in organization of football in Brazil.

To Meyer and Rowan cited by Gonçalves and Carvalho (2006), the interpretation of models of management and decision-making processes adopted by the organizations are only possible from the analysis of the context in which they are involved. Thus, in the scenario of football, this study shows that appropriate to the extent that the contexts and values to which it is subject is profoundly altered in recent years, migrating from an organization based on values and traditions, to another that emphasizes criteria of efficiency, profitability and competitiveness factors in economic and financial factors as the obtaining of revenue, enhancing the brand value and control indebtedness.

2. LITERATURE REVIEW

According to Santos (2011), organizations, in general, including the football clubs, face challenges that arise routinely arising from the dynamic and competitive market in which they operate. Some of these challenges are due, in part, to the high speed with which informations are generated and the quality of those in decision-making. The administrators, in recent decades, have at their disposal a huge amount of analysis tools, such as for example the Analysis of Financial Statements, who assist them in the management of their organizations, and that makes it possible to know the economic and financial condition in which they are at a given time, in addition to providing provide information quickly, efficiently and with quality.

The football clubs, as any organization, need resources in order to meet their financial obligations, such as, for example, with the salaries of its professional staff and, among them, the principal, who is the football player. In Brazil, there are a few clubs that can through professional management and efficient, at the end of each period, obtain positive results (SANTOS, 2011).

According to Peleias cited by Santos (2011), to assess the economic and financial performance of football clubs, as well as in any organization, there is a need for a reference or a parameter to compare them between themselves, against which the performance will be confronted.

In this study, the analysis consisted of a review of the financial and economic data of football teams and were chosen as parameters the aspects related to Total Revenue, Brand Value and Indebtedness, which were made available by football teams from 2009 to 2012. It should be emphasized, but which have not been object of study of this work, the existence of other conditions endogenous and exogenous that can also affect economically and financially the teams.

In relation to the obtaining of financial revenues, according to Rocha (2012), the Brazilian football emphasizes the change that has occurred over the past 50 years in various organizations, leaving to be increasingly an activity purely related to entertainment, from an activity for economic ends. Such changes also affected the procedures for obtaining of financial resources of the teams in Brazil and in the World.

For the author, the tickets sales is no longer the main source of revenue of the teams. Currently, most of the money has other sources such as sponsorship, product sales and contracts for transmission on TV. The tickets sales still constitute an important source of income for the times medium and small, but most of the revenue of the major teams is obtained through the granting of rights of transmission of matches by television.

It is worth noting, even though, according to Silva and Campos Filho (2006), that there are alternatives that can be implemented to expand the sources of revenue of clubs, despite problems such as the socioeconomic conditions of the fans and the threat to the commercial area by external factors such as piracy. Some examples are the agreements with municipalities and the sales of advance tickets. In addition, greater trading in all the clubs with the TV also would be relevant to that revenue from television were greater.

This expansion of sources of revenue not only increase the cash flow of the clubs as it is important for the continuity of these as sports organizations. The Brazilian football would remain as exporter of player due to its quality to reveal talents and not as a result of their mismanagement (SILVA; CAMPOS FILHO, 2006).

As far as the brand value of a football team, as in other organizations, if well built and managed, can cause even more loyalty of the fans, which will provide additional revenue through the sale of products and services associated with the team, inside or outside the arena of competition (BURTON and HOWARD; GUSTAFSON cited by LUCENA; CASACA, 2013).

Thus, quantifying the brand value of a football club is a relevant economic data, because the more power have a brand associated with a football team, there will be a proportional impact on increasing revenues obtained by the sponsors, the image rights of the team and the players and the distribution of services by Internet and mobile phones, the sale of products related to the club and in the development of agreements franchising for official stores (LUCENA; CASACA, 2013).

In studies carried out in Brazil for calculating the brand value of football teams, in addition to the strength of the crowd, the brand value considers other variables such as the habits of the fans and characteristics of the local market, causing the increase or decrease of the brand value is not assigned to an isolated aspect (BDO, 2013).

In relation to indebtedness, according to Rezende et al. (2010), in the Brazilian context, it has been observed a decline in the management, which has caused huge financial crises in clubs. Rezende and Custódio (2012) complementary to this point of view, to say that, however, what is observed is a bankruptcy or financial decadence, because many clubs Brazilians are with serious financial problems, which also shows the amateurism practiced by leaders of Brazilian clubs.

For Brandão (2012), the clubs in Brazil are typically highly indebted. This is due, in most cases, the mismanagement, the lack of transparency, poor accountability, and to further aggravate the situation, the government adopted a series of measures, as was the case of Timemania, which allowed the long-term postponement, 20 years, of debts with social tributes.

According to the author, there is yet another problem, since in the majority of clubs there is a clear separation between the Department of Football and Social Club, which entails the use of "single box" and the possibility of running up debts that would not be priority.

3. OBJECTIVES

The main objectives of this study were to characterize, using Principal Components Analysis, 18 football teams according to three economic and economic factors that are the Total Revenues, the Brand Value and the Indebtedness and understand the temporal dynamics of this process from 2009 to 2012.

4. METHODOLOGICAL PROCEDURES

To meet the proposed objectives classifies this study as descriptive and exploratory, according to Gil (1999), has as its main objective is to describe the characteristics of a given population or phenomenon or establish relations between the variables. In relation to the procedures, the search is classified as documentary once that uses materials that have not yet received any detailed analysis and seeks to select, treat and interpret the information gross, trying to extract from it some sense and add any value, contributing to academic studies in order that others may return to play in the future the same role (SILVEIRA, 2004).

The procedure was characterized by the lifting of information on Total Revenue, Brand Value and Indebtedness, including the period of 2009 to 2012, carried out through the access to the reports made available by consulting BDO RCS and consultations to the Financial Statements of 18 football teams of Brazil.

The classification of the study regarding the approach of the problem classifies it as quantitative, with application of statistical technique PCA. For Oliveira (2001), the quantitative approach demand quantify data, in ways of collecting information, as well as with the employment of resources and statistical techniques since the more simple, as a percentage, mean, mode, median and standard deviation, to use more complex, such as coefficient of correlation, regression analysis etc.

In summary, second Marozini et al. cited by Lima Jr. et al. (2004), the purpose of the PCA is to check if all variables contribute to explain the system. Your main goal is to get a small number of linear combinations, the principal components (PC), constructed with the eigenvalues of the matrix of covariance to retain as much as possible of the information contained in the variables originals. The scores of the principal components can be used in place of original variables in analyzes of regressions, analyzes of groups, etc.

For this study were selected 18 football teams of Brazil belonging to 6 Brazilian States. The 18 clubs selected and its division by States has the following distribution:

- State of São Paulo (SP): Corinthians (SP), São Paulo (SP), Palmeiras (SP), Santos (SP), Portuguesa (SP) and Ponte Preta (SP);
- State of Rio de Janeiro: Flamengo (RJ), Vasco da Gama (RJ), Fluminense (RJ) and Botafogo (RJ).
- State of Rio Grande do Sul (RS): Grêmio (RS) and Internacional (RS);
- State of Minas Gerais (MG): Cruzeiro (MG) and Atlético (MG)
- State of Paraná (PR): Coritiba (PR) and Atlético (PR).
- State of Santa Catarina: do Avaí (SC) and Figueirense (SC).

They were not selected other clubs since they do not appear in the report available by consulting BDO or because they do not have their Financial Statements on their websites or in the Diário Oficial of the States to which they belong. To apply the statistical technique PCA were taken from reports made available by consulting BDO RCS and consultations on Financial Statements the data related to the Total Revenue, Brand Value and Indebtedness of 18 football teams of Brazil in the period between 2009 and 2012 that were part of the sample.

Were calculated, for each variable, all descriptive statistics such as mean, variance, extreme values and for Principal Components Analysis was made to standardize the variables (mean zero and unit variance). All analyzes were processed in the software Statistica, version 7. The option to use three economic and financial factors, namely, Total Revenue, Brand Value and Indebtedness, was because of the availability of documentary evidence.

5. RESULTS

The two first principal components allowed the construction of a biplot graphic shown in Figure 1 that contains the distribution of football teams and of the variables considered. This graph accounts for 94,5% of the variability contained in original variables (61,72% in CP1 and 32,78% in CP2).

For the year 2009, it has been, in the graph in Figure 1, that for the factors Total Revenue and Brand Value are posted the teams Corinthians (SP), São Paulo (SP) and Flamengo (RJ) and for the factor Indebtedness the teams Fluminense (RJ), Botafogo (RJ), Vasco da Gama (RJ), Atlético (MG) and Flamengo (RJ).

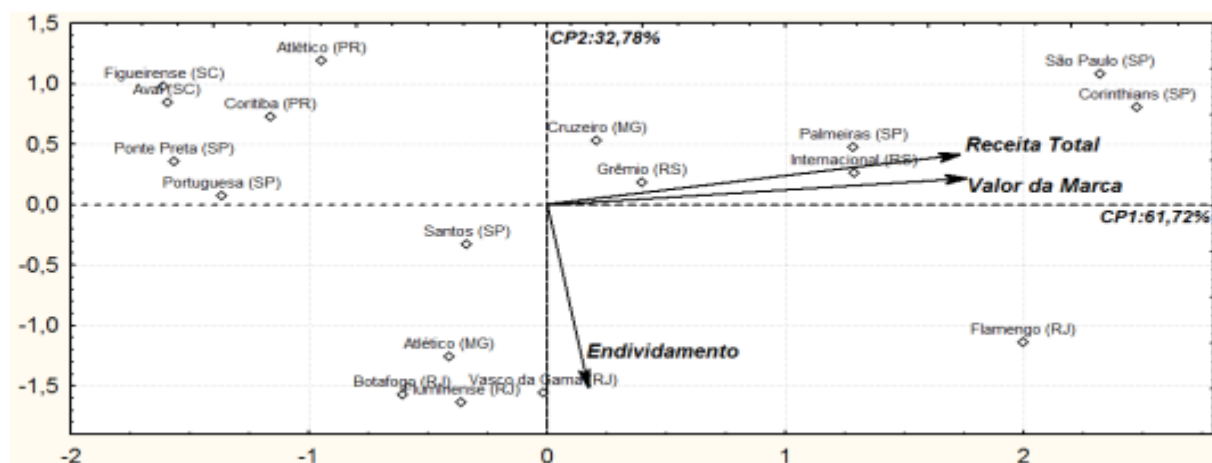


FIGURE 1 – Distribution of football teams in 2-dimensional plane for the year 2009 – CP1xCP2. Source: elaborated by the authors.

This posting can still be observed in the graph in Figure 2 where, for the year 2009, are shown the scores of the first principal component.

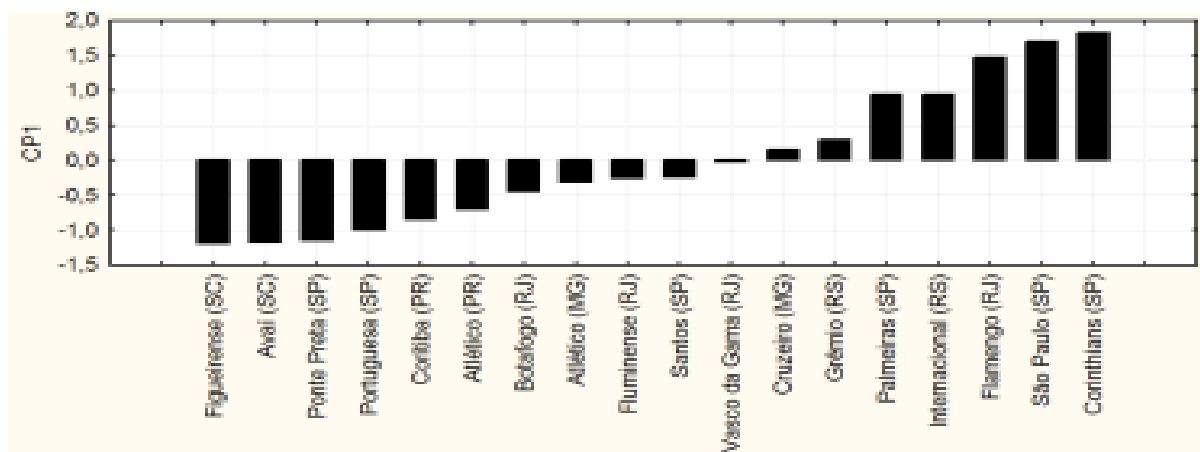


FIGURE 2 – Distribution of the scores of the first principal component for the year 2009. Source: elaborated by the authors.

In the year 2010, are presented as highlights, in Figure 3, for the factors Total Revenue and Brand Value, the teams Corinthians (SP), São Paulo (SP) and Flamengo (RJ) and for the factor Indebtedness the teams Fluminense (RJ), Botafogo (RJ), Vasco da Gama (RJ), Atlético (MG) and Flamengo (RJ).

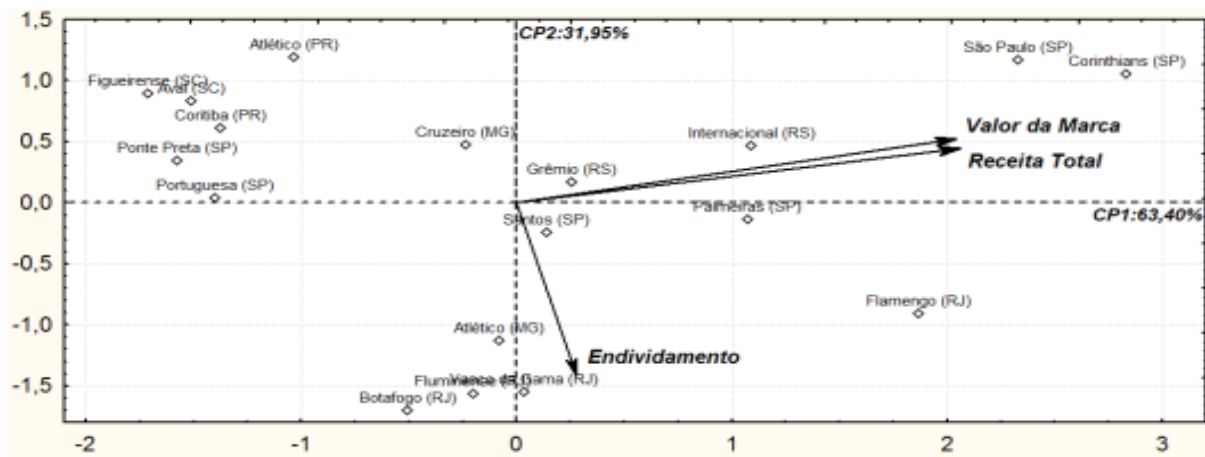


FIGURE 3 – Distribution of football teams in 2-dimensional plane for the year 2010 – CP1xCP2. Source: elaborated by the authors.

In the graph in Figure 4, are presented scores of the principal component number 1 for the year 2010.

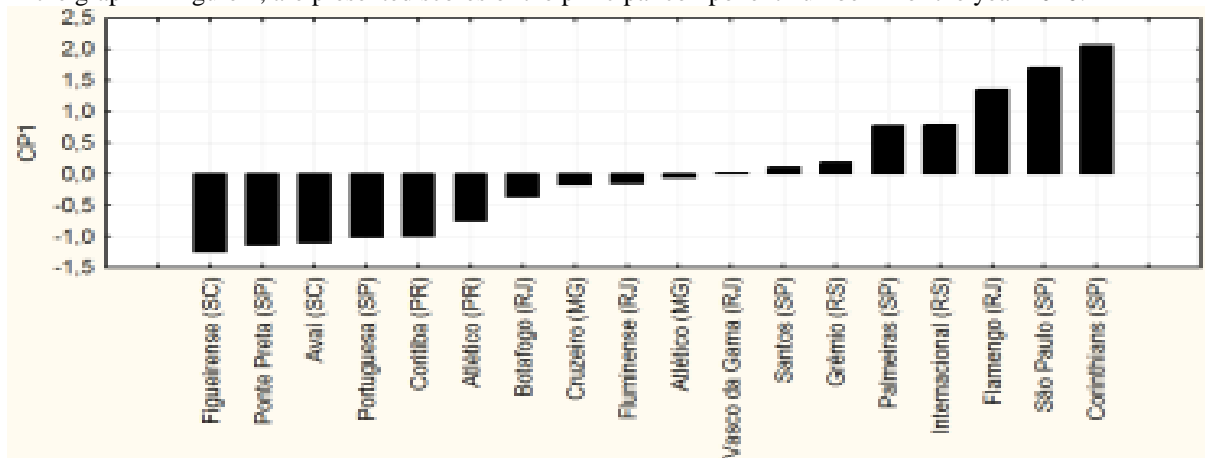


FIGURE 4 – Distribution of the scores of the first principal component for the year 2010. Source: elaborated by the authors.

For the year 2011, are highlighted, for the factors Total Revenue and Brand Value, the teams Corinthians (SP), São Paulo (SP) and Flamengo (RJ) and for, the Indebtedness factor, the team Atlético (MG), as shown in Figure 5.

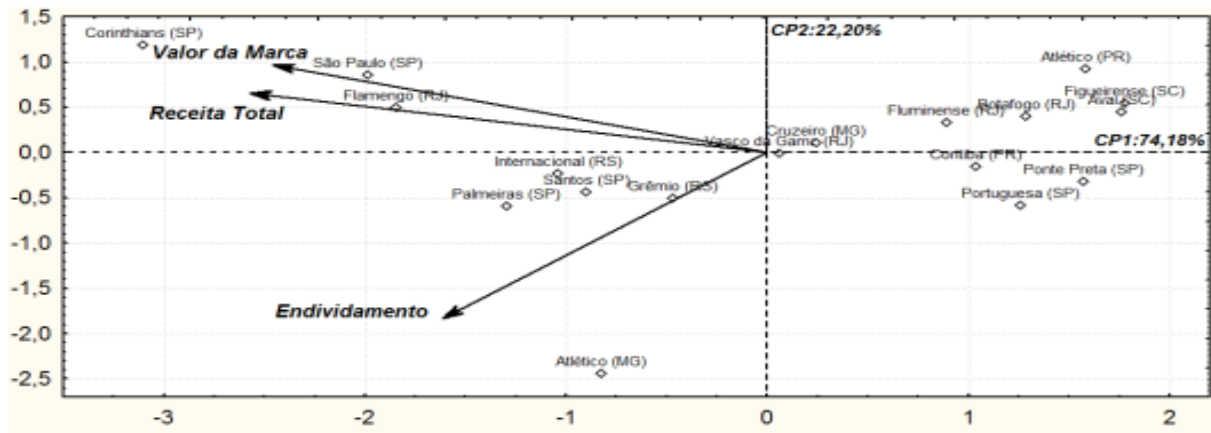


FIGURE 5 – Distribution of football teams in 2-dimensional plane for the year 2011 - CP1xCP2. Source: elaborated by the authors.

For the year 2011, in the graph in Figure 6, has the scores of CP1.

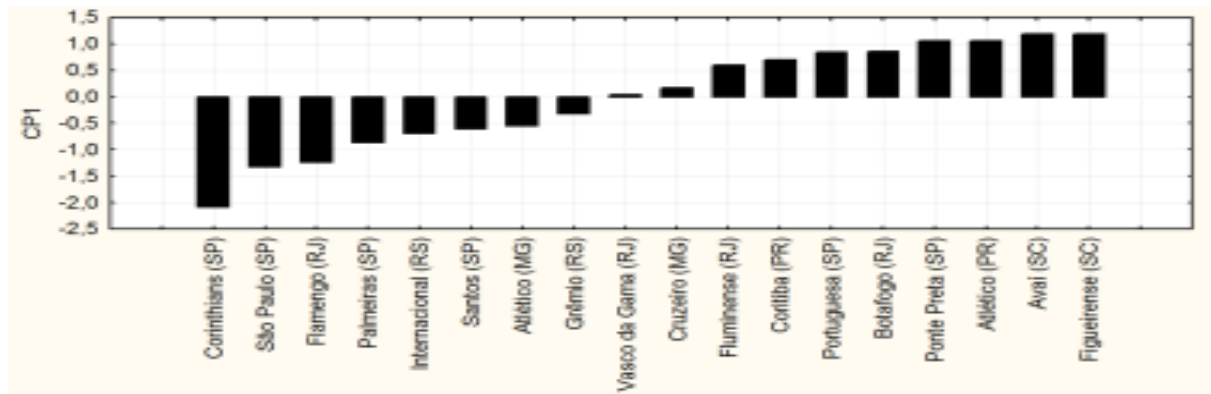


FIGURE 6 – Distribution of the scores of the first principal component for the year 2011. Source: elaborated by the authors.

According to the graph in Figure 7, for the year 2012, it can be highlighted, for the factors Total Revenue and Brand Value, the teams Corinthians (SP), São Paulo (SP) and Flamengo (RJ), and for the Indebtedness factor, the team Atlético /MG.

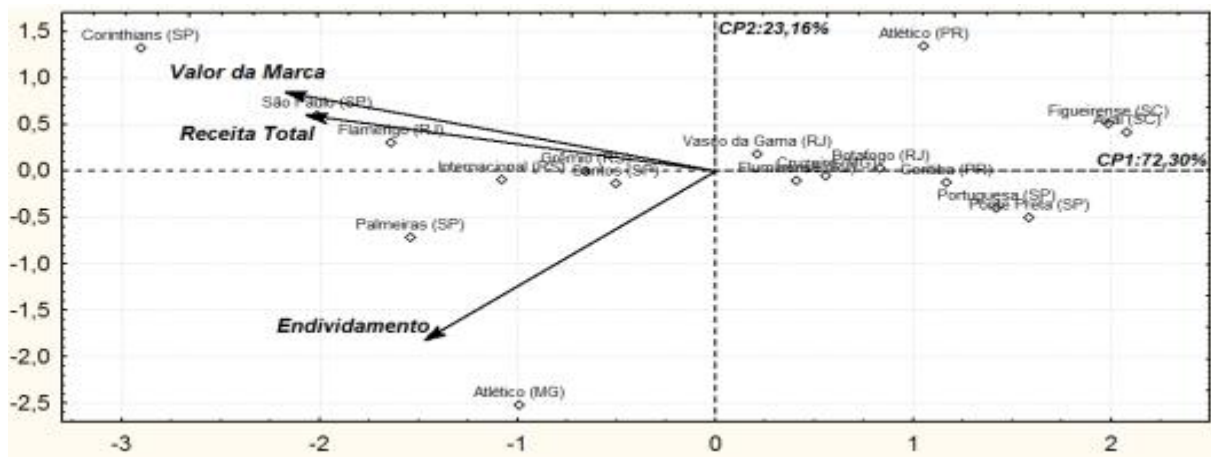


FIGURE 7 – Distribution of football teams in 2-dimensional plane for the year 2012 – CP1xCP2. Source: elaborated by the authors.

The graph in Figure 8 shows, for the year 2012, the scores of the first principal component.

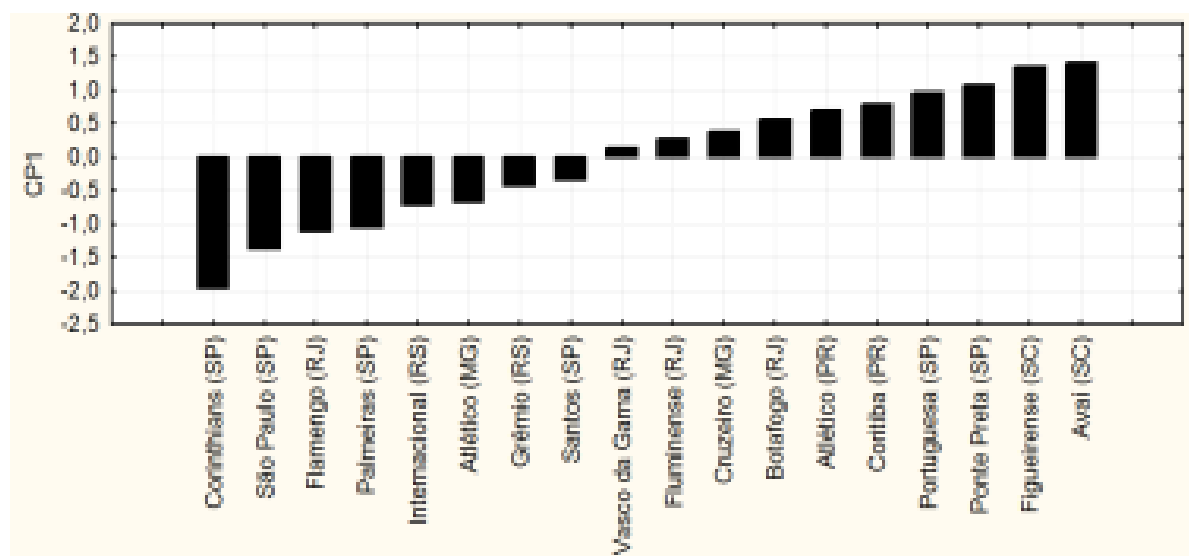


FIGURE 8 – Distribution of the scores of the first principal component for the year 2012. Source: elaborated by the authors.

6. DISCUSSIONS AND CONCLUSIONS

This study aimed to analyze, by applying the PCA, three economic and financial factors of football clubs in Brazil from 2009 to 2012. The result of the research allowed concluding some situations when compared to those in the years 2009 to 2012 as the fact that, for the whole of this period, the football teams Corinthians (SP), São Paulo (SP) and Flamengo (RJ) are always highlighted when are considered the factors Total Revenue and Brand Value.

As for the placement of these three teams as the most relevant in relation to the factor Total Revenue can be considered that a great contribution to this came from an increase in revenue of these football teams due to higher quotas of television, advertising and sponsorship, ticketing and licensing. In addition to these aspects, can cite, in a particular way, that the football team Corinthians (SP) received a reward for winning the titles of Libertadores and the FIFA Club World Cup 2012 held in Japan.

The study of a consulting showed that, when compared to the sources of income, some of them have lost weight in relation to the others. The study cites, as an example, the impulse given by the new contracts for transmission in the revenue that reduced the impact of items such as advertising and sponsorship and tickets sales.

Another study published by reputable consulting worldwide highlighted the recent successes of these three teams of Brazil with suppliers of sports equipment. In accordance with this consulting, the agreements of Nike with the Corinthians (SP), from Adidas with Flamengo (RJ) and Penalty with the São Paulo (SP) reached values practiced by the teams that occupy the Top 20 world in this type of contract to obtain revenue.

In relation to the Brand Value, a possible explanation for this continuity of position, in addition to the economic capacity of these three teams, is the polarization between fans young people. According to a survey, carried out by a relevant newspaper of Brazil in December 2012, approximately 52% of Brazilian fans between 16 and 24 years are fans of Flamengo (RJ), Corinthians (SP) or São Paulo (SP).

Another relevant aspect, specifically in relation to the team Corinthians (SP), in the year of 2012, was the conquest of the titles of the Libertadores and the FIFA Club World Cup 2012 which allowed an excellent opportunity for which there was a significant narrowing of the relationship fans-consumers through marketing actions such as the famous slogan "I will never leave you". This shows that the relationship of the club with the fans is an important aspect in the consolidation of the brand value. Between the years of 2009 and 2012 the brand value of football team Corinthians (SP) went from US\$ 225 million to approximately US\$ 400 million, which meant an increase of 78 %.

In this same period, the football team Flamengo (RJ), which for many decades has the highest percentage of Brazilian fans, had its brand increased by US\$ 227 million to US\$ 317 million, a growth of 39,6% as compared to football team Corinthians (SP), can be considered modest.

The football team São Paulo (SP) had its brand value, between 2009 and 2012, high of US\$ 221 million to US\$ 308 million, showing a growth of 39,3% and situation very similar to the football team Flamengo (RJ).

The results of this research also led to the conclusion that, for the years 2009 and 2010, the football teams Fluminense (RJ), Botafogo (RJ), Vasco da Gama (RJ), Atlético (MG) and Flamengo (RJ) are highlighted when considered the Indebtedness factor and, for the years 2011 and 2012, there is evidence even more significant for the football team Atlético (MG).

One of the reasons that may explain the result verified for these football teams in the period between 2009 and 2010 is the indebtedness with the Timemania. However, it can be seen that this slice is decreasing, which means, in general, that the clubs are paying the tax debit arising from this lottery.

It should be noted, on the other hand, that the balance sheets indicate that many clubs are increasing their tax liabilities post-Timemania, and this usually stems from the update by monetary variation and interest on unpaid taxes again, after that refinancing originating in the lottery. This fact confirms the search for new negotiations with the government for refinancing this debt or even forgiveness. You can also consider that an aggravating factor of football team Atlético (MG) in relation to other teams is constancy to accumulate debts through loans.

However, the football team Atlético (MG) contested the methodologies of the studies published by consultancy to say that the value of its debt would be well below the values that were published. The team claimed that it should not be taken into account the value of deferred tax liabilities, which correspond to taxes that would only be paid in the event of sale of their properties. The team also said that it was the only one to include the item on your balance sheet, it is a recommendation of the new Brazilian standards of accounting. Thus, according to the responsible for the accounts of the team, the correct calculation should be done with the subtraction of taxes the total debt.

Finally, it can be concluded that there are many ways to analyze the economic and financial performance of a football team and that there are many factors that can interfere with to have a positive outcome. This study was developed with the aim to examine three economic and financial factors football teams in Brazil in the period of 2009 to 2012 using the statistical technique Principal Components Analysis.

As a suggestion for future researches, indicates that the analysis of the three economic and financial factors considered in this study in teams of other sports, and if, necessary, incorporate other factors that are important for the research.

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