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# **BRAND TEAMS AND DISTRIBUTION OF WEALTH IN BRAZILIAN STATE CHAMPIONSHIPS**

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## **BRAND TEAMS AND DISTRIBUTION OF WEALTH IN BRAZILIAN STATE CHAMPIONSHIPS<sup>4</sup>**

The paper contributes to explain an unexplored competition that is the Brazilian State Championships. How it is organized and the financial features of three championships are described. The aim of the paper is to discover if the presence of "Brand-teams" in a competition increases the income of all participating teams and if the type of championship conditions the effect of Brand Team on revenues of all teams.

As the present study aims to be a pioneer in economic research on Brazilian State Championships, it has an exploratory character. The study uses an equations system to estimate for testing the hypothesis. The estimation method is 3SLS to delete the possible endogeneity of the variables. There have been studied 400 matches played by 48 teams from *Mineiro*, *Paulista* and *Carioca* Championships in season 2013.

The structure of the Brazilian State Championship, with the participation of brand-teams, creates an income redistribution effect. The features of the visiting team imply an increase in attendance. This effect is moderated by the type of Championship. The Championship structure generates an additional increase of the revenue. They increase according to the phase in which the competition develops.

This paper contributes to introduce the Brazilian State Championships. Moreover, it comes to justify the participation of brand-teams in order to help smallest teams to increase their revenues. The paper shows that the organization of some Championships has more beneficial effects than others.

JEL Classification: L83, L10, H23, E25.

Keywords: Competition structure, redistribution effect, Brazilian football, State Championships, brand-teams.

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## INTRODUCTION

Winner of five World Cups, Brazil is the country with the greatest success in international level football. Despite this, few researchers have demonstrated interest in its study. The Brazilian sporting calendar is different to the European. In addition to the League, National Cup and the continental tournaments, teams take part in the State Championships in Brazil. These State competitions are part of the history of Brazilian football. In fact, for 50 years they were the main event in Brazil. These championships are faced only by clubs from the same state, but from different national divisions.

However, currently, these tournaments are losing support among some clubs and fans. The mass media are proposing alternatives such as changes in the model, decreasing the number of clubs, or excluding the larger clubs from the competition. To date there has been no investigation as to the possible consequences for clubs of such decisions. Thus, this study aims to investigate from a financial perspective the distributive effect of wealth by the State Championships.

In terms of sport as an economic activity, it is important to comment on the importance of the state tournament for the football industry in Brazil. In Brazil there are about 2.1 million registered players<sup>5</sup> ("O Futebol Brasileiro", n.d.). However, this figure represents the total amount of footballers registered in the *Confederação Brasileira de Futebol* (CBF) and in the States Federations, including professionals and amateur players. Analyzing only those with professional or training contracts registered in the Athletes General Registry in the website of the CBF is possible to see that there were only 10,514 players registered in January 15<sup>th</sup> 2014. As the 2014 Brazilian season had not yet begun at that time, this means that the vast majority of players had no team, starting the year unemployed and in a poor state of contract negotiations, with the possibility of being employed only in small teams and with low wages. Close to the end of 2014 season, on November the 14<sup>th</sup>, 12,158 players are registered. Even when the figure has increased still there is a great amount of unemployed players in the Brazilian football. The situation is exacerbated by the fact that 85% of 684 professional clubs in Brazil spent six months without playing any match. Those clubs compete only in their respective State Championships, these taking place only in the first half of year<sup>6</sup>.

Many clubs in Brazil experience financial challenges and hence they have to look for alternative funds. The high marketability of Brazilian footballers brings financial resources to clubs through transfers. Not all clubs have the same financial capacity and fan-base. In this study, clubs are classified as big or small according with the second feature. Moreover, big teams have a brand effect and Pawlowski & Anders (2012) have demonstrated the existence of a significant increase in attendance where the visiting team had a strong brand. Krautmann & Ciecka (2009) and Lee & Fort (2008) remark the effect of playoffs on the increase of revenues but the fact of the participation of brand-teams has not been studied.

The above mentioned factor that strong brand teams attract attendance could result in a rise in the funds for all teams, particularly the smallest, given the structure of the tournaments. In consequence, the present analyzes the effect of the championship system on the distributive effect of wealth, especially through the increase of attendance in small teams by the influence of the visiting team. For that, a series of variables that condition the structure of the championships

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<sup>5</sup> "O Futebol Brasileiro" on the *Portal2014* web site (<http://www.portal2014.org.br/o-futebol-brasileiro>)

<sup>6</sup> "As Propostas do Bom Senso F. C." ([http://issuu.com/bomsensof.c./docs/caderno\\_bom\\_senso\\_fc\\_v\\_final\\_v3\\_int](http://issuu.com/bomsensof.c./docs/caderno_bom_senso_fc_v_final_v3_int))

are taken into account. The structure, the effect of a visiting team -when it is a brand-team- on income are analyzed. The aim of the paper is to discover if there is a redistributive effect in income in the form of an increased revenue for smaller clubs. As a result, this research on the financial impact of the state tournaments could generate recommendations that can support the improved organization of the Brazilian competitions.

In order to achieve this objective, the paper studies the theoretical structure, the methodology and empirical analyses of tournaments of Brazil. Finally, the conclusions are exposed.

## THEORETICAL STRUCTURE

Following the propositions by DeJonghe, van Hoof, Lagae & Verschueren (2010) for the Netherlands and Belgium, and Crolley & Roa (2010) for Mexico, Brazil could also be considered as an established market in football. Its clubs have had international success in the past, as in the case of Europeans. However, Brazilian football still presents a serious problem: its organizational and economic structure has not developed according to its potential. That may justify the increasing loss of interest in the state championships

For many years, match-day tickets were the only source of revenue for football clubs (Fernandes, 2000). While this reality has changed, tickets still represent a significant percentage of teams' total revenue (Deloitte, 2014). Match-day revenues represent 21.75% of total revenues for the top-20 richest clubs in the World (Deloitte, 2014). This percentage is similar in Brazilian football. There, the match-day revenues are 21.25% of the total revenues excluding the transfers of players<sup>7</sup>. So, the demand for tickets is still important. Different factors affect it, for example, the demand for tickets in the NFL is greater if the home team is stronger (Biner, 2014). However, the same author stresses that television audience increases in games played by the teams from the big cities or in those matches more balanced. Moreover, he mentions a peculiar case where support from the Arizona fans depends more on the visiting team than on the local one.

The structure of the championships can have a significant effect on the generation of wealth among participant teams. This structure depends on the number of games, the organization of the tournament and the existence of playoffs. For example, Krautmann and Ciecka, (2009) highlight 'that the expected extra revenues associated with making the playoffs may be worth about \$11 million' in the Major League Baseball. In the same line, Lee and Fort (2008) speak about the fans' increased interest and consequently an economic growth for the playoffs in the MLB.

The State Championships include some big teams competing with other smaller teams. In this study, the differentiation between big and small teams has been done considering the fan-base. Following Ferreira's (2012) criterion, big teams in Brazil are those with more than 2 million followers. This criterion of classification in big and small teams based on the fan-base also reflect the idea of being a brand-team. So, big teams have a brand effect. Feldman (2007) considers two components of that effect: perceived brand image and perceived sporting success. Therefore it is likely that the brand has an impact on attendance. For example, Frank and Nüesch (2007) show an increase in attendance at games home and away depending on the presence of prestigious players in the team. In small teams, that rise in attendance is manifested especially in those games where the visiting team is a big club (Pawlowski and Anders, 2012; Buraimo, Forrest and Simmons, 2009). Koenigstorfer, Groeppel-Klein and Kunkel (2010) have shown that

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<sup>7</sup> For more information see the report *Análise Econômico-Financeira dos Clubes Brasileiros de Futebol (Itaú BBA, 2014)*

the international success of German clubs is a significant attractive factor in the Bundesliga as well as Manchester United generates fans interest in the English Premier League. More particularly, Madalozzo and Villar (2009) have revealed an increase in attendance in the Brazilian League when the home team plays against teams from the States of *Rio de Janeiro* and *São Paulo*. The same effect has been evidenced by Santana and Da Silva (2009) and Bortoluzzo, Iaropoli and Machado (2011), which present statistically significant increments of attendance in matches versus teams from *Rio de Janeiro* or *São Paulo* as visitant. Moreover, Santana and Da Silva (2009) also found an increase in attendance of the local teams when they play against any of the top eight in the Brazilian ranking of the CBF. In addition, all the three last papers cited above have shown increased demand in derbies. Beccarini and Ferrand (2006) assert that the image of a club is influenced by sporting performance, efficient management and satisfaction of their fans.

In general, brand image has effect on the consumer (Kim, Park, & Kim, 2014) and in particular on fans of football teams (Blumrodt, Bryson and Flanagan, 2012). Therefore, the following hypotheses are proposed.

H1. The presence of "Brand-teams" in a competition increases the income of all participating teams.

This hypothesis can be subdivided into two sub-hypotheses, considering the path for the effect of brand image on revenue:

H1.a. the presence of "Brand-teams" in competitions increases attendance in the championships,

H1.b. attendance increases revenues.

In parallel, some elements that moderate the effect of brand image on income, according to the structure of the championship can be considered, as different authors like Krautmann and Ciecka (2009) and Lee and Fort (2008) suggest. The structure of championships presents differences by composition, number and type of matches, and playoffs.

H2. The type of championship<sup>8</sup> conditions the effect of Brand Team on revenues of all teams.

Again this hypothesis can be decomposed into two sub-hypotheses:

H2.a. the type of championship conditions the effect of Brand Team on attendance

H2.b. the type of championship influences the effect of attendance on income.

## **METHODS, RESEARCH DESIGN AND DATA ANALYSIS**

This study uses an exploratory empirical analytical method. The data used correspond to three Brazilian State Championships: *Rio de Janeiro (Carioca)*, *Sao Paulo (Paulista)* and *Minas Gerais (Mineiro)* for the 2013 season. Each tournament had a different competition model with a diverse number of participants. In total, 400 matches from 48 clubs were analyzed. We conducted a regression where the normal logarithm of incomes serves as dependent variable. It is explained with the attendance to each game, the average price of the ticket, the type of game played, the home team, the away team and the expenses related to the match. To investigate the kind of matches we used a dummy, assuming a value of 1 when the game corresponded with the appropriate (for example, quarter-final, semi-final or final). To analyze the influence of the brand

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<sup>8</sup> They are going to be described in the next section.

team in the games, we used a dummy value of 1 when a brand club is playing as home or away.

### 3.1. Method

As the present study aims to be a pioneer in economic research on Brazilian State Championships, it has an exploratory character. The study uses an equations system to estimate for testing the hypothesis. The estimation method is 3SLS to delete the possible endogeneity of the variables (Green, 2002).

### 3.2. Sample

Among all 27 State Championships, there are only seven in which some club champion of the *Campeonato Brasileiro* plays. In the research, we have chosen states with at least two clubs winners in the National League, with the premise of having no supremacy of only one team in the state investigated. With that premises, the sample was reduced to four state tournaments: *Paulista*, *Gaúcho*, *Carioca* and *Mineiro* Championships. The financial data was gathered from the websites of the state federations. *Federação Gaúcha* does not present the financial reports of matches in their website. For this reason, that federation has been excluded from the investigation.

The most traditional and important clubs have been the founders of *Clube dos 13*, elite group of Brazilian football, created in 1987 with the aim of improving the football market in Brazil (Silva Jr., Salazar & Feitosa, 2014). Their successes were evaluated in the ranking of each tournament. Only those teams with more than 20 state titles and at least once championship of the *Campeonato Brasileiro* were selected. Regarding the fan-base, brand-teams are considered as those with over 2 million followers (Ferreira, 2012). So, the branded clubs for the purpose of this study are as follows: Atlético-MG and Cruzeiro in Minas Gerais; Corinthians, Palmeiras, Santos and São Paulo in São Paulo; Botafogo, Flamengo, Fluminense and Vasco in Rio de Janeiro.

The chosen season for this study was 2013. It was the most recent tournaments played prior to the start of the research. Federations choose their own competition structure and, in this case, each of the three tournaments has a different competitive structure. In total, there have been 400 games played by the 48 teams in this investigation. In the following section the competitive structure adopted in each state is briefly explained.

### 3.3. *Campeonato Mineiro*

In this Championship, 12 teams participated. In the first phase, each team played once against each opponent with the top four qualifying for the semifinals. Each semifinal was played in two matches, with each team playing once at home and once away (1<sup>st</sup> vs. 4<sup>th</sup> and 2<sup>nd</sup> vs. 3<sup>rd</sup>). The final follows the same model with two matches, a home and an away leg<sup>9</sup>.

### 3.4. *Campeonato Paulista*

The *Paulista* Championship took another model. The tournament included 20 teams, with each team playing against the other clubs. The top eight teams then qualified to the quarter-finals. These were decided in a single match, where the home team was more successful in the first part of the tournament. The confrontation was organized as follows: 1<sup>st</sup> vs. 8<sup>th</sup>, 2<sup>nd</sup> vs. 7<sup>th</sup>, 3<sup>rd</sup> vs 6<sup>th</sup> and 4<sup>th</sup> vs. 5<sup>th</sup>. The four winners of their respective matches progressed to the semifinals, which

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<sup>9</sup> For more information see the web site of the *Federação Mineira* (<http://www.fmfnet.com.br/novoportal>).

were also settled in a single match. The final, however, was played over two legs. The second leg was held at the stadium of the best classified in the first phase. Besides traditional playoffs, in the 2013 *Paulista* Championship, small teams that lost in the quarterfinals played another match between them. The rules were the same as the *Paulista* Championship, that is, one match for the 'B' semifinal "B" and a two-legged 'B' final<sup>10</sup>.

### 3.5. *Campeonato Carioca*

The *Campeonato Carioca* model was different again. With 16 teams, divided into two groups of 8, the tournament had two parts: *Taça Guanabara* (TG) or Guanabara Cup and *Taça Rio* (TR) or Rio Cup. In the TG, Group 1 teams played against teams from Group 2, resulting in each team playing eight games. The top two in each group reached the semifinals (1<sup>st</sup> of group A vs. 2<sup>nd</sup> in the group B and 1<sup>st</sup> in group B vs. 2<sup>nd</sup> in group A). The semifinals were contested as a single match, the winners progressing to a final, also a single match. In the TR, the teams played against opponents in their own group; resulting in a total of seven games for each club. As in the former case, the top two in each group met in the semifinals and the winners in the final, all contested in a single match schema. In the end, the winner of the *Taça Guanabara* faced the winner of the *Taça Rio* in the Final of the Championship. This final was played in two games, one at each stadium. However, in 2013, the same team, Botafogo, won both the TG and TR and, therefore, became champion directly, without the need to play a Final<sup>11</sup>.

### 3.6. The model and variables

The hypothesis to test determine the model. They are that: a) the presence of Brand-teams in a competition increases attendance and it increase the income of all participating teams and b) if the type of championship conditions the effect of Brand Team on revenues of all teams. So the model are going to be:

$$Attendance = f(phase, brand-team, championship)$$

$$Revenue = f(attendance, brand-team, championship)$$

The phase of the competition is going to be expressed through three dummy variables: Quarter-final, Semifinal and Final. They will take value '1' if the match correspond to that particular phase, '0' otherwise.

The brand-teams can play at home or away. So there are two dummy variables: Home-team and Away-team. If the home or visiting team is a brand-team, then the respective variable will have value '1', otherwise it will value '0'.

Championships are also represented with dummy variables taking value '1' if it is the correspondent championship. *Paulista* Championship is taken as base.

Attendance and Revenue are continuous variables expressed by its logarithm.

### 3.7. Descriptive analysis of Brazilian State Championships

The financial data have been analyzed on a match by match basis for the three state tournaments in the sample. However, in the following tables aggregate information is presented. Thus,

<sup>10</sup> For more information see the web site of the *Federação Paulista* (<http://www.futebolpaulista.com.br>).

<sup>11</sup> For more information see the web site of the *Federação Carioca* (<http://www.fferj.com.br>).

financial data accumulated by team, the financial effect generated by matches against brand-teams, the financial effect of the playoffs and the presence of the branded clubs at knock-out stages in these tournaments are presented. The financial data was collected in Brazilian currency, the Real (R \$), but here the United States dollar has been used as the standard currency in the study<sup>12</sup>.

Before testing the proposed hypothesis, it is worth introducing some financial features of the championships under study. Table 1 reflects the remarkable difference between the minimum and maximum values of all the variables. These figures highlight the financial strength of the brand-teams when compared to the other teams. Comparing the total financial results with financial results obtained without playing against the brand-teams (FRNPBT), losses are observed in all tournaments if there are no matches against Brand-teams. Moreover, the negative average of the Carioca Championship without the brand-teams and negative financial results in the TR demonstrate the weak financial situation of the tournament in Rio de Janeiro. The average attendance in all tournaments was small, but was poorest in the Carioca Championship.

**Table 1. Main features of the analyzes State Championships**

|                                 |                       | <i>Mineiro</i><br>(n=12) | <i>Paulista</i><br>(n=20) | <i>Carioca-TG</i><br>(n=16) | <i>Carioca-TR</i><br>(n=16) |
|---------------------------------|-----------------------|--------------------------|---------------------------|-----------------------------|-----------------------------|
| <b>Revenues (US\$)</b>          | <b>Minimum</b>        | 56,105.94                | 193,901.98                | 19,990.10                   | 6,603.96                    |
|                                 | <b>Maximum</b>        | 3,157,378.71             | 3,544,946.55              | 612,371.29                  | 119,693.07                  |
|                                 | <b>Average</b>        | 542,646.53               | 733,124.35                | 111,023.20                  | 38,563.89                   |
|                                 | <b>Standard error</b> | 932,222.52               | 788,423.46                | 157,034.84                  | 33,204.44                   |
| <b>FRNPBT (US\$)</b>            | <b>Minimum</b>        | -24,620.74               | -29,572.63                | -139,012.49                 | -174,057.34                 |
|                                 | <b>Maximum</b>        | 1,544,928.22             | 1,751,072.92              | 1,919.28                    | 7,305.94                    |
|                                 | <b>Average</b>        | 195,519.48               | 188,659.77                | -14,733.49                  | -30,612.17                  |
|                                 | <b>Standard error</b> | 486,160.81               | 405,645.23                | 36,104.17                   | 59,159.28                   |
| <b>Financial Results (US\$)</b> | <b>Minimum</b>        | 11,559.60                | 60,035.83                 | -143,194.66                 | -173,630.20                 |
|                                 | <b>Maximum</b>        | 2,128,945.40             | 2,131,999.19              | 167,502.82                  | 4,667.45                    |
|                                 | <b>Average</b>        | 323,133.02               | 401,385.62                | 1,544.85                    | -32,336.40                  |
|                                 | <b>Standard error</b> | 622,546.70               | 478,691.07                | 62,598.83                   | 58,188.84                   |
| <b>Average Attendance</b>       | <b>Minimum</b>        | 433.60                   | 568.25                    | 765.50                      | 339.00                      |
|                                 | <b>Maximum</b>        | 19.556.00                | 21.382.33                 | 7.188.60                    | 3.117.40                    |
|                                 | <b>Average</b>        | 4.112.40                 | 4.373.40                  | 2.542.49                    | 1.518.98                    |
|                                 | <b>Standard error</b> | 6.437.89                 | 4.972.72                  | 1.991.37                    | 916.22                      |

Table 2 shows the financial importance of the matches played against the brand-teams. On the *Paulista* and *Mineiro* Championships, 7 and 4 clubs, respectively, have moved from a loss-making situation to profitability only because they have had the opportunity to compete against big clubs. That scenario was not evident in the *Carioca* Championship. Specially, in the case of the TG there are no changes. However in the TR 3 clubs move from being loss making to profitability after taking account of matches played against the brand-teams.

<sup>12</sup> Applied the exchange rate of May 10th 2013 (\$ 1.00 = R \$ 2.02).



**Table 2. Number of clubs with profit/loss including matches versus brand-teams or not including them.**

|                          |               | <i>Mineiro</i><br>(n=12) | <i>Paulista</i><br>(n=20) | <i>Carioca-TG</i><br>(n=16) | <i>Carioca-TR</i><br>(n=16) |
|--------------------------|---------------|--------------------------|---------------------------|-----------------------------|-----------------------------|
| <b>FRNPBT</b>            | <b>Profit</b> | 5                        | 16                        | 5                           | 10                          |
|                          | <b>Loss</b>   | 7                        | 4                         | 11                          | 6                           |
| <b>Financial Results</b> | <b>Profit</b> | 12                       | 20                        | 5                           | 7                           |
|                          | <b>Loss</b>   | 0                        | 0                         | 11                          | 9                           |

Table 3 demonstrates how playing Playoffs matches results in a financial upturn. In *Mineiro*, *Paulista* and *Carioca* (TG) tournaments, all the teams that reached that phase of the championship improved their financial results. However, in the TR *Carioca* Championship, only 2 clubs reported a financial improvement, one team maintained its financial results from the first phase and another had poorer results.

**Table 3. Changes in Financial results after playoff matches.**

|                   | <i>Mineiro</i><br>(n=4) | <i>Paulista</i><br>(n=8) | <i>Carioca-TG</i><br>(n=4) | <i>Carioca-TR</i><br>(n=4) |
|-------------------|-------------------------|--------------------------|----------------------------|----------------------------|
| <b>Improved</b>   | 4                       | 8                        | 4                          | 2                          |
| <b>Maintained</b> | 0                       | 0                        | 0                          | 1                          |
| <b>Reduced</b>    | 0                       | 0                        | 0                          | 1                          |

The financial improvement provided to the rest of clubs by the Brand-teams is reflected in the accumulated financial results presented in Table 4. The financial result of the *Mineiro* Championship grows 65.27% if matches in the 1<sup>st</sup> phase with brand-teams are included. In the case of the *Paulista* Championship the increase is more than 2 times. The negative result turns into positive in the *Carioca* Championship-TG. That is not the case for the *Taça Rio*, where the opposite outcome was observed. Moreover, this table displays the impact of the playoffs matches. In that phase of the competition, despite the fact that there are fewer teams, they generate better financial results in the first phase tournaments in *Minas Gerais*, *São Paulo* and *Rio de Janeiro* (*Taça Guarabara*). In the case of the TR, the results of that phase are still negative but better than in the regular phase. It is worth noting than brand-teams usually qualify for the playoffs (see Table 5). In fact, in 2013 all the teams qualified to playoffs in *Mineiro*, *Paulista* and *Carioca TG* Championships were brand-teams. Only in the case of *Carioca TR* half of the teams were branded. This fact can also partially explain the poorer financial results presented in that championship where the structure of the competition has an influence on the percentage of brand-teams that qualify for the knock-out rounds. In general, a wide financial gap is perceived between the three events studied.

**Table 4. Accumulated Financial Results (US\$)**

|  | <i>Mineiro</i><br>(n=12) | <i>Paulista</i><br>(n=20) | <i>Carioca-TG</i><br>(n=16) | <i>Carioca-TR</i><br>(n=16) |
|--|--------------------------|---------------------------|-----------------------------|-----------------------------|
| <b>FRNPBT</b>                                    | 2,346,233.74             | 3,773,195.44              | -235,735.79                 | -489,794.74                 |
| <b>1<sup>st</sup> phase</b>                      | 3,877,596.31             | 8,027,712.36              | 24,717.60                   | -517,382.31                 |
| <b>Playoffs</b>                                  | 4,207,082.75             | 8,441,608.66              | 832,331.04                  | -165,392.72                 |
| <b>Total = (1<sup>st</sup> phase + Playoffs)</b> | 8,084,679.05             | 16,469,321.02             | 857,048.64                  | -682,775.03                 |

**Table 5. Brand-teams classified to the Playoffs**

|             | <i>Mineiro</i><br>(n=4) | <i>Paulista</i><br>(n=4) | <i>Carioca-TG</i><br>(n=4) | <i>Carioca-TR</i><br>(n=4) |
|-------------|-------------------------|--------------------------|----------------------------|----------------------------|
| <b>2013</b> | 100%                    | 100%                     | 100%                       | 50%                        |
| <b>2012</b> | 100%                    | 100%                     | 100%                       | 75%                        |
| <b>2011</b> | 100%                    | 100%                     | 75%                        | 75%                        |
| <b>2010</b> | 100%                    | 50%                      | 100%                       | 100%                       |
| <b>2009</b> | 100%                    | 100%                     | 75%                        | 100%                       |

## PRELIMINARY RESULTS AND DISCUSSION

The financial results presented statistically positive correlations with playoff matches and negative with matches in the first phase, a situation that comes to confirm the study by Krautmann & Ciecka (2009), who asserted an improvement by \$11 million in revenue for the teams to reach the playoffs in the MLB. Lee & Fort (2008) show in their work a statistically significant growth in the attendance for the playoffs. Together, we have found positive statistical correlation between financial performance and the presence of brand teams playing as local and visitor. The results of this work allows us to infer that there should be more crucial matches and that the big teams play more times as visitors, because these matches generate improved financial results. Further studies could be used to different variables, as well as other state championships and most seasons.

**Table 6. Influence of phase, home and away team, and championship on attendance**

|               | lnAttendance       |
|---------------|--------------------|
| QUARTER-FINAL | 0.413<br>(1.10)    |
| SEMIFINAL     | 0.164<br>(0.67)    |
| FINAL         | -0.109<br>(0.34)   |
| HOME-TEAM     | 1.833<br>(20.33)** |
| AWAY-TEAM     | 1.494<br>(16.09)** |

|         |                     |
|---------|---------------------|
| Carioca | -1.124<br>(13.24)** |
| Mineiro | -0.318<br>(3.11)**  |
| _cons   | 7.413<br>(126.06)** |
| $R^2$   | 0.69                |
| $N$     | 398                 |

\*  $p < 0.05$ ; \*\*  $p < 0.01$

In the first regression, the effect of the phase, the visiting team and championship are studied and controlled by the effect of the local team. The home team controls for the importance of support. Apparently, the phase in the competition is important, since it could be expected that a final match attracts more than a match during the qualification phase. However, we have observed that the phases do not influence attendance because what matters is not the moment in the competition but rather the teams involved in a particular match. This is evidenced by the regression (see table 7) excluding the visiting team, where if the match is a semifinal attendance increases and the final increases attendance even more. But that effect fades considering the importance of the visiting team.

**Table 7. Influence of phase, home team, and championship on attendance (excluding the effect of brand visiting team)**

|               | LnAttendance         |
|---------------|----------------------|
| Quarter-Final | 0.910<br>(1.89)*     |
| Semifinal     | 0.823<br>(2.65)***   |
| Final         | 1.183<br>(2.95)***   |
| Home-Team     | 1.720<br>(14.85)***  |
| Carioca       | -1.053<br>(9.64)***  |
| Mineiro       | -0.362<br>(2.75)***  |
| _cons         | 7.719<br>(107.74)*** |
| $R^2$         | 0.48                 |
| $N$           | 398                  |

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

The control variable is significant indicating that the fans of the local team are essential to explain the attendance. A possible improvement in the model would be to find a control variable that best measures the effect of supporters.

The effect of the visiting team is significant. In this sense, the fact of involving brand-teams in this kind of championships contributes to an increase of attendance to the stadium. It also represents a distributional effect so that the brand-teams generate financial benefit for the other clubs.

Finally, the type of championship also has an impact: the attendance in *Campeonato Paulista* is slightly higher than in *Campeonato Mineiro* and higher still than in the *Campeonato Carioca*.

**Table 8. Influence of attendance, away team, and championship on revenues.**

|              |               |                      |
|--------------|---------------|----------------------|
| LnAttendance | Quarter-Final | 0.367<br>(1.08)      |
|              | Semifinal     | 0.208<br>(0.94)      |
|              | Final         | 0.009<br>(0.03)      |
|              | Home-Team     | 1.825<br>(20.61)***  |
|              | Away-Team     | 1.485<br>(16.26)***  |
|              | Carioca       | -1.126<br>(13.40)*** |
|              | Mineiro       | -0.323<br>(3.20)***  |
|              | _Cons         | 7.416<br>(127.56)*** |
| LnRevenue    | LnAttendance  | 1.268<br>(42.47)***  |
|              | Away-Team     | 0.133<br>(1.83)*     |
|              | Carioca       | -0.227<br>(3.71)***  |
|              | Mineiro       | -0.051<br>(0.77)     |
|              | _Cons         | 0.780<br>(3.30)***   |
| N            |               | 398                  |

\*  $p < 0.1$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$

Then, if the away team also has a direct effect on club revenues apart from what already occurs indirectly through the increase of attendance was tested using 3SLS to avoid possible endogeneity problems. Complementary, it has been tested if this effect is different in each of the championships.

The result indicates that there is an additional effect of the visiting team in the revenue achieved by the teams to the effect directly produced by the attendance. There is also a slight effect of the Championship that only affects the *Carioca* championship given that the revenues in this tournament are slightly lower than in the other championships.

It is worth mentioning that when an increase of 1% of the attendance to stadium occurs, an increase of 1.268% in match-day revenues happens. Thus, it can be said that the increase in demand resulting from the attraction of a brand-team translates into a rise in average ticket prices.

## CONCLUSIONS

This work has analyzed the structure of the Brazilian state championship, its impact on clubs' revenues and, in particular, the existence of an income redistribution effect. This relocation of income is crucial to keep alive smaller teams. The grassroots are not only created in the bigger teams. Therefore, the structure of the championships should promote the maintenance of the broad base of teams that, eventually, in the long run, will generate good players.

To preserve those smaller teams it is necessary to help them through tools to increase their income, thus avoiding the use of the public funds. That is why it is relevant to analyze the redistributive effect of income that the structure of the Championship produces. In this work, that effect is analyzed through the increase in the attendance due to the fact of competing with teams that have image brand, normally, the big teams. That means a model in two stages, where the image of brand increases the attendance and this raises the revenues. At the same time, the effect of the different structures of Championships on these two relations is analyzed.

The results indicate that the features of the visiting team imply an increase in attendance. In that sense, it can be asserted, in accordance with Pawlowski and Anders (2012), that there is a positive effect of the image of brand of the team on attendance to the stadiums. This effect is moderated by the type of Championship. However, other features of the structure of the competition, such as the phase in which the party is played (Krautmann Ciecka, 2009; and Lee and Fort, 2008), do not condition the attendance.

It is expected that additional presence of fans at the stadium will generate more revenues, but the study shows that, in addition, Championship structure generates an additional increase of the revenue. They increase according to the phase in which the competition develops. Krautmann and Ciecka (2009) and Lee and Fort (2008) examined the impact of different structures, such as the phase of the competition, but not the own Championship itself as this work has tested. The type of Championship also conditions the revenues.

All this suggests the suitability of the current system of organization of the Brazilian State Championships. While the existence of differences among them could suggest that some structure is better than others and a better balance between teams could be implemented.

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