THE INFLUENCE OF THE FIRST GOAL ON THE FINAL RESULT OF THE FOOTBALL MATCH

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ABSTRACT

Background. Among many technical and tactical aspects of the behaviour of players, the goals are the most studied. The goal is the key to success for teams and its analysis in all matches of a major football tournament that allows multiple assessments.

Methods. The aim of this study was to analyze the influence of the first goal on the final result of the football match, identifying the team that scored the first goal and the final result obtained by this team: winning, drawing or losing, and subsequently, to relate the obtained results to physical, technical, tactical and psychological performance. We analyzed all the matches of the last 5 editions of the 6 major football tournaments (national teams) in the world: FIFA World Cup, UEFA Euro, CONMEBOL America Cup, AFC Asian Cup, CAF Africa Cup of Nations, and FIFA Confederations Cup ($n = 996$). The data were obtained from the database on the websites of the official federations, through overviews of the official matches. Quantitative data were collected in relation to the time that the goals were scored in the course of the matches. The statistical analysis of the results was conducted using the non parametric chi-square test.

Results. According to the results, the team that scored the first goal in these last tournaments presented a high probability of winning (the average of 71.17% in the 6 tournaments).

Conclusion. Thus, the high probability of victory in favour of the team that scores the first goal in the match of football is linked to the physical, technical, tactical and mainly the psychological aspects.

Keywords: psychological goal, tactical aspects, evolutionary trends, football tournaments.

INTRODUCTION

In competitive sports, and more specifically in football, the level of performance is determined by a number of dexterities and abilities that are significantly inter-correlated: technique (coordination abilities, kinetic skillfulness), tactics (cognitive and planning abilities), psychological factors (motivation, desires, willingness) and finally, fitness (Weineck, 1997). The union of these skills and capabilities has the pursuit of victory as the main objective, through a good defensive performance, avoiding goals marking by the opposing team, and good offensive performance, by goals marking (Leite, 2013a).

In football matches the goal is the pinnacle of the game, it determines the procedures that lead to the goal, and therefore the imbalance on the scoreboard supposed to find some of the keys of the game, as it allows identifying the most effective forms of attack, and, conversely, providing insight to better defensive organization. Both aspects are an important base for tactical training of the teams (Mombaerts, 2000). The evaluating goal scoring patterns in football matches may contribute to determining the factors that enable effective competition performance (Armatas, Yiannakos, Papadopoulou, & Skoufas, 2009a). It is the aim of every coach to prepare players such that they can score goals to win matches and tournaments (Njororai, 2014).
Among the many technical and tactical aspects of players behaviour, the goals are the most studied. The goal is the key of success for the teams (Cachay & Thiel, 2000 as cited in Michailidis, Michailidis & Primpia, 2013) and therefore its analysis in all matches in a big football tournament (e.g. World Cup, European championship, World Cup, etc.) allows for multiple assessments. These results are used by the coaches with the view of producing more effective training sessions in their teams. Additional analyses of consecutive tournaments and comparison of the results can indicate trends in football evolution over time (Lottermann, 2000; Theis, 2000 as cited in Michailidis et al., 2013).

The need for constant record and evaluation of football characteristics is prevalent since it presents continuous evolvement and change as far as the mode of the game is concerned. Additionally, the information collected from researchers through these studies, and transferred to coaches and players, is very important for the design of training, the choice of appropriate tactics and its application in the game (Yiannakos & Armatas, 2006).

Coaches and sports scientists in general strive to learn the scoring patterns and the basic situations that prevail during matches so as to improve players’ scoring skills. One of the key aspects of scoring that the coach and players should pay attention to is the distribution of goals throughout the match (Njororai, 2007). Therefore, being aware of how the goals occur allows coaches to prepare their guided training in competitive environment (Dias & Santana, 2006; Fukuda & Santana, 2012), creating a favourable environment for the development of players and teams (Alves & Bueno, 2012).

The present study aims to expand the knowledge level of the internal dynamics involving the football, as well as variables that possibly explain the phenomena that occur in the practice of this sport modality. It is attempting to inquire performance indicators, technical and tactical perspectives that unbalance the match in our favour (Huges, 2004). In this sense, the aim of this study was to analyze the influence of the first goal on the final result of the football match identifying the team that scored the first goal of the match and the final result obtained by this team: win, draw or defeat; thus, identifying what is the probability of a team that scores the first goal of the match to be victorious and subsequently, to relate the obtained results to physical, technical, tactical and psychological performance.

METHODS


The data were obtained from the database on the websites of the official federations: Union of European Football Association – UEFA (www.uefa.com); Confederación Sudamericana de Fútbol – CONMEBOL (www.conmebol.com); The Asian Football Confederation – AFC (www.the-afc.com); Confédération Africaine de Football – CAF (www.cafonline.com); Fédération Internationale de Football Association – FIFA (www.fifa.com); through official overviews of the games. We collected quantitative data which are related to the times the goals were scored in the course of the matches. Castellano, Casamichana, and Lago (2012) established the reliability of the FIFA match statistics by randomly coding five matches and compared it with the FIFA website data. The resulting values using Cohen’s Kappa (K) were between .93 and .97. This establishes a high reliability index for the FIFA and other federations’ website data.

Procedure. For the study, we used the following variable - the relationship between scoring the first goal of the game and the final result obtained by the same team, using the variables: Victory, Draw and Defeat. For this variable, as it is described in studies developed by Leite and Barreira (2014), Barreira, Garganta, Guimarães, Machado, and Anguera (2014) and Machado, Barreira, and Garganta, (2014), only the goals scored during regular time of the game, 90 minutes, were considered.

Data analysis. All data were analyzed using the statistical package for PC SPSS 20.0. (Lead Tecnologies Inc, USA). Non parametric chi-square ($\chi^2$) analysis was used to determine the statistically significant differences and the level of significance was set at $p < .05$. 
RESULTS

The data in Table 1 show the results obtained in the matches of the last 5 editions of the FIFA World Cup. In World Cup 2014, in 74.08% of the matches (40 matches), the team that scored the first goal won the match. In World Cup 2010, the team that scored the first goal was victorious in 78.57% of the matches (44 matches). In World Cup 2006, in 73.68% (42 matches), the team that scored the first goal won the match. In World Cups 2002 and 1998, the team that scored the first goal was victorious in 63.94% (39 matches) and 65% (39 matches) of the matches, respectively.

The data in Table 2 show the results obtained in the matches of the last 5 editions of the UEFA Euro. In Euro 2012, in 75.86% of the matches (22 matches), the team that scored the first goal won the match. In Euro 2008, the team that scored the first goal was victorious in 72.42% of the matches (21 matches). In Euro 2004, in 53.85% (16 matches), the team that scored the first goal won the match. In Euro Cups 2000 and 1996, the team that scored the first goal was victorious in 70% (18 matches) and 72% (18 matches) of the matches, respectively.

The data in Table 3 show the results obtained in the matches of the last 5 editions of the CONMEBOL America Cup. In America Cup 2011, in 66.67% of the matches (14 matches), the team that scored the first goal won the match. In America Cup 2007, the team that scored the first goal was victorious in 70.83% of the matches (17 matches). In America Cup 2004, in 61.54% (16 matches), the team that scored the first goal won the match. In America Cups 2001 and 1999, the team that scored the first goal was victorious in 80% (20 matches) and 72% (18 matches) of the matches, respectively.

The data in Table 4 show the results obtained in the matches of the last 5 editions of the AFC Asian Cup. In Asian Cup 2015, in 78.13% of the matches (20 matches), the team that scored the first goal won the match. In Asian Cup 2011, in 60.71% of the matches (14 matches), the team that scored the first goal won the match. In Asian Cups 2007 and 2004, the team that scored the first goal was victorious in 68.96% and 68.73% (14 matches) of the matches, respectively.

### Table 1. The influence of the first goal on the final result of the match in FIFA World Cups (%)

<table>
<thead>
<tr>
<th>Aspect (excluding 0x0 draws)</th>
<th>FIFA World Cup 2014</th>
<th>FIFA World Cup 2010</th>
<th>FIFA World Cup 2006</th>
<th>FIFA World Cup 2002</th>
<th>FIFA World Cup 1998</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Win</td>
<td>74.08</td>
<td>78.57</td>
<td>73.68</td>
<td>63.94</td>
<td>65</td>
<td>71.06*</td>
</tr>
<tr>
<td>Draw</td>
<td>11.11</td>
<td>16.07</td>
<td>14.04</td>
<td>22.95</td>
<td>25</td>
<td>17.83</td>
</tr>
<tr>
<td>Defeat</td>
<td>14.81</td>
<td>5.36</td>
<td>12.28</td>
<td>13.11</td>
<td>10</td>
<td>11.11</td>
</tr>
</tbody>
</table>

Note. * – statistically significant difference between draw and loss ($p < .05$).

### Table 2. The influence of the first goal on the final result of the match in UEFA Euro (%)

<table>
<thead>
<tr>
<th>Aspect (excluding 0x0 draws)</th>
<th>UEFA Euro 2012</th>
<th>UEFA Euro 2008</th>
<th>UEFA Euro 2004</th>
<th>UEFA Euro 2000</th>
<th>UEFA Euro 1996</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Win</td>
<td>75.86</td>
<td>72.42</td>
<td>53.85</td>
<td>75</td>
<td>73.08</td>
<td>70.04*</td>
</tr>
<tr>
<td>Draw</td>
<td>17.24</td>
<td>13.79</td>
<td>23.07</td>
<td>14.29</td>
<td>26.92</td>
<td>19.06</td>
</tr>
<tr>
<td>Defeat</td>
<td>6.9</td>
<td>13.79</td>
<td>23.07</td>
<td>10.71</td>
<td>10</td>
<td>10.90</td>
</tr>
</tbody>
</table>

Note. * – statistically significant difference between draw and loss ($p < .05$).

### Table 3. The influence of the first goal on the final result of the match in CONMEBOL America Cups (%)

<table>
<thead>
<tr>
<th>Aspect (excluding 0x0 draws)</th>
<th>CONMEBOL America Cup 2011</th>
<th>CONMEBOL America Cup 2007</th>
<th>CONMEBOL America Cup 2004</th>
<th>CONMEBOL America Cup 2001</th>
<th>CONMEBOL America Cup 1999</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Win</td>
<td>66.67</td>
<td>70.83</td>
<td>61.54</td>
<td>80</td>
<td>72</td>
<td>70.21*</td>
</tr>
<tr>
<td>Draw</td>
<td>28.57</td>
<td>12.5</td>
<td>26.92</td>
<td>12</td>
<td>16</td>
<td>19.20</td>
</tr>
<tr>
<td>Defeat</td>
<td>4.76</td>
<td>16.67</td>
<td>11.54</td>
<td>8</td>
<td>12</td>
<td>10.59</td>
</tr>
</tbody>
</table>

Note. * – statistically significant difference between draw and loss ($p < .05$).

### Table 4. The influence of the first goal on the final result of the match in AFC Asian Cups (%)

<table>
<thead>
<tr>
<th>Aspect (excluding 0x0 draws)</th>
<th>AFC Asian Cup 2015</th>
<th>AFC Asian Cup 2011</th>
<th>AFC Asian Cup 2007</th>
<th>AFC Asian Cup 2004</th>
<th>AFC Asian Cup 2000</th>
<th>Average</th>
</tr>
</thead>
<tbody>
<tr>
<td>Win</td>
<td>78.13</td>
<td>75</td>
<td>60.71</td>
<td>68.96</td>
<td>60.87</td>
<td>68.73*</td>
</tr>
<tr>
<td>Draw</td>
<td>9.37</td>
<td>14.29</td>
<td>25</td>
<td>24.14</td>
<td>34.78</td>
<td>21.52</td>
</tr>
<tr>
<td>Defeat</td>
<td>12.5</td>
<td>10.71</td>
<td>14.29</td>
<td>6.9</td>
<td>4.35</td>
<td>9.75</td>
</tr>
</tbody>
</table>

Note. * – statistically significant difference between draw and loss ($p < .05$).
matches (25 matches), the team that scored the first goal won the match. In Asian Cup 2011, the team that scored the first goal was victorious in 75% of the matches (21 matches). In Asian Cups 2007, in 60.71% (17 matches), the team that scored the first goal won the match. In Asian Cups 2004 and 2000, the team that scored the first goal was victorious in 68.96% (20 matches) and 60.87% (14 matches) of the matches, respectively.

The data in Table 5 show the results obtained in the matches of the last 5 editions of the CAF Africa Cup of Nations. In Africa Cup 2015, in 40.74% of the matches (11 matches), the team that scored the first goal was victorious in 68.96% (20 matches) and 60.87% (14 matches) of the matches, respectively.

The data in Table 6 show the results obtained in the matches of the last 5 editions of the FIFA Confederations Cup. In Confederations Cup 2009, the team that scored the first goal was victorious in 78.57% of the matches (11 matches). In Confederations Cup 2005, in 66.67% (10 matches), the team that scored the first goal won the match. In Confederations Cups 2003 and 2001, the team that scored the first goal was victorious in 78.57% (11 matches) and 100% (14 matches) of the matches, respectively.

Table 7 shows the average results for each analyzed tournament. According to results, the team that scores the first goal of the match features a probability of 71.17% to get the victory, 18.65% probability to draw the match, and 10.18% being defeated.

**DISCUSSION**

According to the data of tables 1–7, the team that scores the first goal in a football match presents a high probability of achieving victory (average of 71.17%). This probability is increasing, often in tournaments held in recent years. According to Leite (2013 b), this phenomenon can be explained because modern football has changed over the last few years. Among these changes are tactical evolution and modern fitness.
According to Castillo-Rodríguez et al. (2007), football is evolving in order to outline the matches tactically, observing little variations in matches and few goals, which makes us see the importance of being the team to score the first goal, since in a high probability the team will be winning. The tactical football evolution has been such that it is observed as the team goes ahead on the scoreboard in a few occasions draw and even less is defeated by the opposing team. As Bloomfield, Polman and O’Donoghue (2005) suggest, the start goal is influential in determining the match result.

In the literature of football, there are some studies investigating the influence of the first goal on the final result of the football match (Armatas & Yiannakos, 2010; Leite, 2013b). Saltas and Ladis (1992 as cited in Armatas, Yiannakos, Zaggelidis, Papadopoulou & Fragkos, 2009b) examined all the matches of the Greek championship 1990–1991 and found that the team that scored the first goal of the game came out victorious in 70.3% of all matches. Armatas et al. (2009a) studied the influence of the first goal for the final result of the game in 240 matches in the Greek Super League 2006–2007 and found that in 71.43% the team that scored the first goal of the game won.

Armatas et al. (2009b) also studied the influence of the first goal on the final outcome of the Greek Super League games from 2007–2008, of the 240 matches played in the competition, the team that scored the first goal of the match came out victorious in 74.2%. Sampedro and Pietro (2012) checked the effect of scoring the first goal for the final result of the match in the Spanish league in the seasons 2005-06 to 2009-10. In total 1,759 matches were analyzed and it was found that on average the team that scored the first goal was victorious in 79.32%.

According to Armatas and Yiannakos (2010), maybe the participation of very weak teams in World Cup, but also the deterioration of physical condition of most teams (tournament conducted after all major leagues) resulted in a decreased reaction when a team was conceded a goal. Probably the participation of weaker teams, mainly related to the technical aspect (but also considering the tactical and physical aspects), is certainly one of the possible causes. The deterioration of the physical condition, by itself, does not seem to explain it, since all the teams participating (e.g. in the World Cup and Euro Cup), participate in tournaments at the end of their leagues and have similar schedules.

As football is a tactical and strategic sport, the contextual variable of the partial outcome of the match seems to have an influence on the game and the player, as the teams alter the style of play based on the partial result of the match (Bloomfield et al., 2005; Taylor, Mellalieu, James & Shearer, 2008), probably after achieving a goal the coaches change their tactics and give more defensive orientation in their team (Michailidis et al., 2013), making it difficult that the result of the scoreboard change (Castillo-Rodríguez et al., 2007).

Although it does not happen always, usually, the team scores a goal (in the first case), has a natural tendency to retreat somewhat their redlines and defend more, e.g., playing longer amid zones field instead of attack or defence areas as it usually happens when the score is tied (Bloomfield et al., 2005). This forces the opposing team, which is at a disadvantage, having to try to reverse the score, implying that the team risking more to the attack (Castillo-Rodríguez et al., 2007). According to Leite (2013a), this fact has two characteristics:

- Exposes the team that is looking to reverse the score the more attacking the opposing team, and consequently suffer counterattack;
- Can also cause physical exhaustion be more pronounced in this team, which may favour a higher incidence of goals at the end of the match by the opposing team.

The goal also appears to be an inducer factor of high psychological burden on the players (Álvarez-Medina, Giménez-Salillas, Corona-Virón & Manonelles-Marqueta, 2002), being a strong predictor of the final result (Sampedro & Pietro, 2012). Roffé, De la Vega, García-Mas and Llinás (2007) claim that every analysis that has been done on the “psychological goal” (also called psychological moment) has been able to find relevant relationships with psychological variables both individual or of a team. Gayton, Very & Hearns (1993) define the psychological moment as the benefit obtained when you have an initial success in a sporting context, which produces a psychological moment in the athlete that will lead to future success and that explains the yielded variations in the teams and in their players.

Theis (1992) reported that when a team scored the first goal, it demonstrated improvement in performance and increased self-confidence. Football coach should have his players prepared tactically and psychologically in order to be ready to face getting back in score. Thus, training should
include training matches with different numbers of players and time limit.

The mental aspect just seems to be the main factor associated with the influence of the first goal for the final result of the game, however, there are other factors (e.g. substitutions, expulsions, interval) that seem to influence the performance of the teams but with less relevance (Roffé et al., 2007), i.e. the team that can score the first goal of the game tends to improve their psychological aspect, maintaining or improving their performance, while the team that suffers the first goal also suffers a decrease in psychological aspect, tending to reduce its performance in competition (Leite & Barreira, 2014). According Roffé et al. (2007), the player can enter a “psychological crisis”, during which their ability to meet the demands and needs of the competition can be substantially altered.

Bompa (2005) states that the higher the player’s level is, the bigger the demand requirement will also be and therefore the stress during a game. According to Brandão (2000), from the psychological point of view, stress is related to the activation of cognitive, psychological or mental activity. The author found the stress factors in football players, saying that, in the modality, stress is a complex and multifunctional process that can negatively influence the performance of the athlete. Thus, having to try to return an adversely score, besides the physical exhaustion, it can certainly cause the player’s psychological strain.

Currently, with the technical balance achieved by athletes and high performance football teams, the emotional aspects (psychological) have been considered as an important differential in the moments of great decisions (Acevedo & Pérez, 2013; Rubio, 1999; Rubio, 2002; S. Souza, L. Souza & Ferreira, 2011) and may be often the difference between victory and defeat in a competition. With the psychological work, the athlete may have a better adaptation to the rigorous work effort that requires belong to a high-performance team (Cárdenas & Cárdenas, 2012).

**CONCLUSION**

Comparing the results found in this study with the results of previous studies, scoring the first goal in a modern football match is a high probability of achieving victory. According to Garganta (1997), the final result of a player or team in sports games has a multifactorial character. Therefore, sports performance can be attributed to a high degree of specialization and development of the physical, technical, tactical and psychological parameters.

Thus, the high probability of victory in favour of the team that scores the first goal in the match of football is linked to these aspects, mainly the psychological parameter. In top-level football teams, the team that is well trained and able to maintain a good performance in all these aspects tends to be more likely to perform better in the match.

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