

# UNPREDICTABILITY OF FOOTBALL GAMES

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## INTRODUCTION

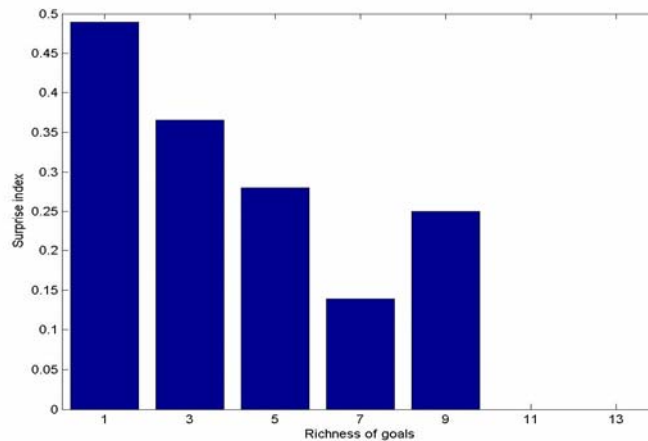
Football attracts much more attention compared to other kinds of sports like basketball and tennis. Provided that the mathematical modeling is done correctly the excitement and the greater amount of attention of people to football can become measurable and the difference in the spectator amounts with other sports can be explained. The correlation between the unpredictability of the scores and the richness of goals could be a good reasoning for this situation. This project aims to find this relation factor.

## METHODOLOGY

First step was to make use of the data set consisting of 80 different factors available for 3 half seasons and reducing it into 10 reasonable more compact factors which are football player, referee, spectator percentage, pass completion ratio, successful goal per goal positions, shots on target ratio, red card, ball possession, temperature and home or away factors respectively. Secondly multiple linear regression analysis method was applied to the first two half seasons to find the weights of these factors. Then by using these weights, the results of the 3<sup>rd</sup> half season was forecasted. As a third step the estimated results were compared with the real results and a surprise index is determined accordingly. Finally the correlation between the surprise index and the richness of goals is obtained.

## RESULTS AND CONCLUSIONS

It is observed that the most important factor affecting the score of the game is the pass completion ratio. The second and third ones are the ball possession and the referee factors respectively. The spectator percentage factor seems to have the least importance.



As the number of scores increase in a football game, the surprise index decreases; this could explain the difference between the number of football spectators and other sports.

## REFERENCES

FSTATS statistics [www.fstats.net](http://www.fstats.net)

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