

## DIFFERENCES BETWEEN THE PLACE OF THE MATCH AND BALL POSSESSION IN FOOTBALL LEAGUE

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### Abstract

Based on 88 matches in the 2014/2015 season of the first Croatian football league, a difference was determined to exist between the match place (hosts and guests) and ball possession. The results of t-test determined that the match place does not influence ball possession ( $p=0,38$ ). This data shows that technical and tactical quality does not depend on the place that the match was played; more specifically, the teams do not adjust according to the place of match, because changes in the play need to be practiced over a longer time period.

**Key words:** ball possession, notational analysis, situational efficacy, football

### Introduction

During the football match one can observe a time period or a state of the match in which the ball is controlled by a player of either team.

State of the ball possession is the state of the match where one team's players have established control over the ball and they organize the offence through individual, group, and collective offence actions.

The time that the team spent in the offence is an important indicator of performance in one or more matches, and is called the possession of the ball.

Possession of the ball is the time that the team spent in the offence (ball in the play and out of play for the offence team). Also, to analyze the ball possession, one can set an additional criterion – whether the ball was in play or out of it.

As any other sport, football is a game of time and space. Unlike other sports, it is played in a large space with a large number of players. In the offence phase, the team is in possession of the ball, which allows it to reach the basic goal – score.

During ball possession the players use individual tactics and work as a collective in order to transport the ball in the last quarter of the field – in front of opponent's goal– and score a goal.

The question often asked is whether it makes a difference if the match is played at home field when it comes to ball possession and general advantage for the home team.

### Methods

#### Material for analysis

88 matches of MaxTV first Croatian football league were researched. The analysis was supposed to be done on one half-season consisting of 90 matches. Due to technical difficulties, one match was not filmed and one ended in 3:0 score because of rule breaking.

#### Sample

Entities in this research are teams. First Croatian football league consists of 10 clubs.

#### Variable sample

Matches were described using notated performance indicators (variables) of ball possession (Bašić et al., 2015)

#### Data collection

Matches were filmed to HDD/DVD in the form of video material. Using a computer tool called Courteye, matches were analyzed and prepared for data processing. Five notators worked on match analysis.

#### Statistical analysis

To determine reliability of gathered data, intra-observer variability was used for differences between data gathered by the same notator in two situations (Hughes et al., 2002, 2003, 2004). Ball possession reliability was determined to be at 97%. To determine differences between host and guest teams, t-test was applied.

## Results

### Structure of match outcome for host teams

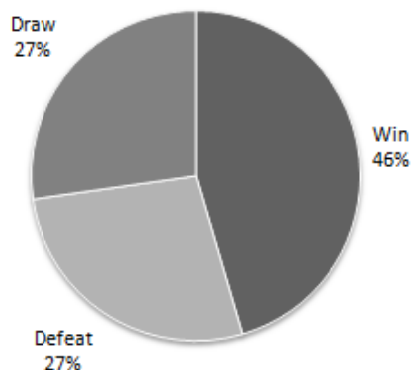


Image 1. The percentage of host team matches ending in win, defeat, or draw

### Ball possession structure for host teams

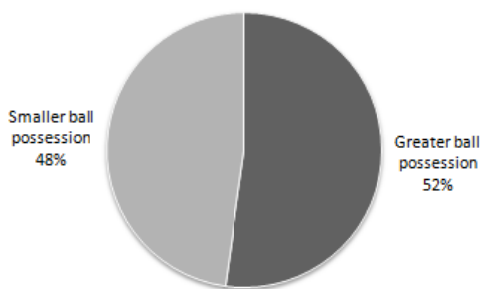


Image 2. Percentage of ball possession for host teams

Table 1. Arithmetic mean (AM) and standard deviation (SD) of ball possession of host teams (H) and guest teams (G), and t-value (t) for determining notability differences and errors (p)

	AM	SD	t	p
H	50,44	6,66	0,88	0,38
G	49,56	6,66		

## Discussion and conclusion

Based on results from Image 1 we can see that teams playing at home field win in 46% of cases, lose in 27%, and end in draw in 26%. This proves psychological advantage brought by home turf, because they know the surroundings, experience positive cheers from the crowd, and are closer to stadium and require no unknown accommodation – all of which is directly connected to the end result.

This data is similar to Lago-Penas and Lago Ballesteros research (2011). On the other hand, based on results in Table 1 and Image 2, there is no significant difference in ball possession between hosts and guests ( $p=0,38$ ). This data is similar to Lago and Martin (2007) and Lago-Penas and Lago-Ballesteros research (2011).

We can conclude that the place of match does not affect ball possession because both teams are aware of their quality of play, so they do not adjust technical and tactical system to the match place. Any type of significant changes needs to be practiced over a longer period of time.

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## RAZLIKE U MJESTU ODIGRAVANJA UTAKMICE I POSJEDA LOPTE U NOGOMETNOJ LIGI

### Sažetak

Na temelju 88 utakmica prve Hrvatske nogometne lige sezone 2014/2015 utvrđivana je razlika između mjesta odigravanja (domaćin i gost) i posjeda lopte. Na temelju rezultata t-testa za utvrđivanje razlika dobiven je podatak da mjesto odigravanja ne utječe na posjed lopte ( $p=0,38$ ). Dobiveni podaci ukazuju da tehničko-taktička kvaliteta ne ovisi o mjestu odigravanja, odnosno da se ekipe ne prilagođavaju mjestu odigravanja, jer je određene promjene u načinu igre potrebno uvježbavati duži vremenski period.

**Ključne riječi:** posjed lopte, notacijska analiza, situacijska efikasnost, nogomet

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