

Press Release

Home advantage despite playing behind closed doors***New study proves: Soccer fans are not the main factor in home-field advantage***

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Since the Corona pandemic there has been much discussion about whether home-field advantage has diminished as a result of empty football stands. A new study carried out by the German Sport University Cologne and the Paderborn University shows that home advantage does exist even without supporter presence.

In professional soccer, the home team wins more often than the away team. This so-called home-field advantage can be seen across all leagues around the world and is an empirically proven phenomenon. Across European leagues the ratio of home wins, draws and away wins over the last ten seasons with spectators was roughly 45:27:28, meaning the home team wins in 45 out of 100 games, and the away team only 28 out of 100 games. The reasons often cited for this are the direct influence that supporters have on refereeing decisions plus the more offensive style of play of the home team, spurred on by home fans' chants.

"We analyzed more than 40,000 games before and during the pandemic. This involved all matches from ten seasons, from ten leagues, from six European countries," explains Professor Daniel Memmert who conducted the research together with Fabian Wunderlich at the German Sport University. Among these, they looked at more than 1,000 professional matches in the top European soccer leagues played behind closed doors. In addition they included betting odds that offer a direct reading of how the betting market assesses home advantage in matches played with and without spectators.

"We know from numerous studies that the betting market rarely gets it wrong. What's more, betting odds have the advantage that, unlike real outcomes, they are less susceptible to random influences," explains Fabian Wunderlich.

"Our results show," says Professor Memmert, "that although differences in the relevant parameters, such as goal kicks and yellow and red cards decrease without supporters, this has only a limited effect on the actual home advantage when directly comparing pre-Covid-19 matches with supporters and those played during the pandemic without supporters." The data show that without the home fans, referees no longer favour the home team and both host and guest teams play equally offensively. Yet, in spite of this, the study's key finding indicates a clear home team

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advantage that persists even in matches played without the presence of their fans. Expressed in numbers, this means that in matches without spectators the ratio of home wins, draws and away wins changed only slightly to 43:25:32. The very different public perception of the effect is probably based on differences between the leagues, that the data revealed. While the ratio of results changed most dramatically in the German Bundesliga (46:24:30 with spectators; 33:23:45 without spectators), other leagues as the English Premier League showed hardly any effect (46:25:30 with spectators; 47:22:32 without spectators).

If the home advantage exists for professionals in absence of spectators, then it must be true for amateur games too. "Absolutely!" agrees Professor Matthias Weigelt, co-author of the study from the Paderborn University. "We also looked at almost 6,000 games from the Kreisliga A (District Premier League) and saw that home-field advantage applies not only to professionals but also to recreational kickers, even though they rarely, if ever, get to enjoy full stands and loud chanting fans." Moreover, what is missing in Kreisliga A is the hassle of travelling to an away match, something which is often regarded as a factor in home-field advantage.

Accordingly, the home advantage cannot be explained by the positive influence of social support from supporters alone, the research concludes. Other co-determinants, such as the territorial behaviour of the home team in familiar surroundings, are decisive for the home advantage.