Google Trends data can improve predictions of soccer players' market value

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These findings suggest that incorporating measurements of player popularity can improve predictions of players' market value. Credit: derJani, Pixabay, CC0 (creativecommons.org/publicdomain/zero/1.0/)

Researchers have developed a novel strategy for using Google Trends—a

website that evaluates the popularity of Google searches—to assess soccer players' popularity, and demonstrated that this method improves predictions of players' market value.

Pilar Malagón-Selma and colleagues at Universitat Politècnica de València, Spain, presented these findings in the open-access journal *PLOS ONE* on August 16, 2023.

A soccer player's market value is relevant in numerous contexts, including transfers between teams and assessing the financial value of teams. Researchers are increasingly focused on analyzing factors that affect market value, such as players' physical characteristics and performance on the field. In recent years, player popularity has emerged as a key factor affecting market value. However, only a few studies have explored the potential role of Google Trends in market value predictions.

Now, Malagón-Selma and colleagues have developed a novel method for using Google Trends to assess player popularity for the purpose of market value prediction. This method involves asking Google Trends to compare the popularity over time of two players simultaneously. It calculates six different indicators of popularity that can be compared among players, and adjusts calculations according to a common scale so that many players can be compared at once.

To test their new method, the researchers trained three machine learning models using data on 1,428 players from the "Big Five" European soccer leagues from the 2018–2019 season and transfer fees for the following summer. Development of a common scale for comparing popularity involved selecting several reference players, including the overall most popular forward, midfielder, and defender of that season—Cristiano Ronaldo, Paul Pogba, and Sergio Ramos—as well as several notably less popular players.

Popularity indicators calculated using the new method improved the accuracy of the market value predictions, when incorporated alongside other factors traditionally used for such predictions. The indicator with the biggest impact on the best-performing model was a player's level of popularity during their least popular times.

These findings suggest that incorporating measurements of player popularity can improve predictions of players' market value. To provide a more complete view, the authors encourage future researchers to include longitudinal data about clubs' revenue, as well as data on players' position or injuries, which can influence their performance and, by extension, their market value.

The authors add, "This paper provides practical guidance for developing and incorporating the proposed Google Trends indicators. They could be applied in sports analytics and any study in which popularity is important. Therefore, we expect researchers in other relevant areas to use this new methodology."

More information: Malagón-Selma P, Debón A, Domenech J, Measuring the popularity of football players with Google Trends, *PLOS ONE* (2023). DOI: 10.1371/journal.pone.0289213 , journals.plos.org/plosone/arti … journal.pone.0289213

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