

Referees' Bias and International Relations

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It is known from the behavioral economics literature that sports referees make biased decisions as a result of the fans and players pressure and/or due to their prejudices ([Page and Page, 2007](#); [Boyko, Boyko, and Boyko, 2007](#); [Dawson et al., 2010](#); [Johnston, 2008](#); [Dawson and Dobson, 2010](#); [Pope and Pope, 2015](#)). To the best of our knowledge, there were no attempts to estimate the role of international relations in the referee's performance. This research is aimed to close this gap.

We test the diplomatic closeness hypotheses about the close link between the number of fouls (penalties, yellow cards, red cards) whistled by the football referee against the team and the international relations of the countries that the referee and the team represent. Developing the correct empirical strategy is crucial at this stage. One of the problems is that any two teams usually play against each other no more than two times during a season. Two different teams can have too many differences, so it is not correct to compare the matches between different teams. The easiest way to deal with this problem is controlling for the teams' quality. The variables that we use as controls are the ELO rating and the UEFA team rating.

Next, we cluster the European countries with respect to diplomatic closeness and its influence on the football referees' decisions. The objective function that is used in the clustering problem is based on the measure of the diplomatic closeness between countries

that the referee and the teams represent (Lamberova et al., 2019) and the number of fouls that the referee calls (penalties, yellow cards, red cards) against each team.

We investigate how the link between diplomatic closeness and its influence on the football referees' decisions changes across time. We hypothesise that as time passes, the magnitude of this effect decreases. The reason is the increasing professionalism of the referees.

Results of this research can be used to promote educational programs for the referees. For example, such program was implemented for the National Basketball Association (NBA) referees after the research revealed empirical evidence of referees' bias towards the players with the opposite color (Price and Wolfers, 2010). After several years, this discrimination was eliminated (Deutscher, 2015; Pope, Price, and Wolfers, 2018). Development and installation of such program can be regarded as an important step towards the increase of attractiveness of the European football.

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