The aim of this thesis is to study the extent to which the English Premier League referees are influenced by social pressure, especially by the home support and by the general popularity of the teams. Using regression analysis, we compare the actual length of the overtime, which is fully in the competence of the referee, with the predicted one from the usual game stoppages. Then we try to identify factors that contribute to any possible discrepancy. Our results suggest that the games tend to be extended beyond the expectations when the outcome of the game still can change, i.e., when the score differential at the time 90:00 is either zero or one. However, this extra extension happens almost regardless of the playing teams and thus we find no evidence for referee bias towards any specific team. However, a small bias towards the group of "Big" teams has been found, but only in the games in which the score differential was different from one.