

Are Subjective Evaluations Biased by Social Factors or Connections? An Econometric Analysis of Soccer Referee Decisions

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Many incentive contracts are based on subjective evaluations and contractual disputes depend on judges' decisions. However, subjective evaluations raise risks of favouritism and distortions. Sport contests are a fruitful field for testing empirically theories of incentives. In this paper the behaviour of the referees in the Italian soccer (football) league ("Serie A") is analyzed. Using data on injury (or extra) time subjectively assigned by the referee at the end of the match and controlling for factors which may influence it (players substitutions, yellow and red cards, penalty kicks, etc.), we show that referees are biased in favour of home team, in that injury time is significantly greater if home teams are losing. The refereeing bias increases greatly when there is no running track in the stadium and the crowd is close to the pitch. Following the 2006 "Serie A" scandal we test whether favouritism emerges towards teams suspected of connections with referees finding that these teams obtain favourable decisions. Social pressure by the crowd attending the match however appears to be the main cause of favouritism.

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1. Introduction

Many incentive mechanisms are based on subjective evaluations since it is often difficult to find verifiable objective measures of performance (Prendergast, 1999). Often these evaluations are made by supervisors, placed between the principal and the agent, who are delegated by the principal to observe and evaluate agent performances and are not residual claimants of output. Incentive theories have emphasized that subjective evaluations are plagued by a host of problems, from influence costs and rent-seeking to collusion and corruption, from compression of ratings to favouritism (Milgrom, 1988; Tirole, 1992; Prendergast and Topel, 1996). Such problems may be caused by exchange of money or favours between the agent and the supervisor (side-payments) to obtain a better evaluation or may be related to psychological and social considerations (Akerlof, 1980; Becker and Murphy, 2000). In fact, the social environment created inside an organization by daily personal relationships between agents and supervisors influences judgments and, at the same time, evaluations might be based on a supervisor's personal preferences.

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