

EFFORT ALLOCATION IN WORKING GROUPS: THE CASE OF EUROPEAN SOCCER

by

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Extended abstract

A general problem of working teams is how to diversify their work and attention in order to cope with different tasks. Professional sports, an association football in particular, offer a fertile ground to explore this issue as both team objective functions and time devoted to different activities (matches) are clearly defined and publicly observed. Using a pan-European sample of around 68,000 match observations, this paper proposes a deep learning model to estimate the effect of a recent European Champion League (ECL) match on team's performance in domestic league matches. This approach is particularly well suited to evaluate 'what if' scenarios in causal analysis as it allows treatment and confounding variables to freely interact at different layers. We find that a recent ECL match distorts team's performance in domestic leagues. Furthermore, this distortion depends on whether (1) the treated team plays at home and away and (2) the ECL match precedes or proceeds the domestic league match. We discuss the role of fatigue and working environment in explaining these results. Although, mean causal effects are of small size, they drastically increase for clubs with low ELO rating emphasizing the importance of company resources to deal with multiple activities.

Key words: sports economics, causal analysis, multi-tasks, deep learning, causal analysis.

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