Credibility Loss Among the Generally-Wise Crowds and the Upsurge of Underdog Teams

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Background, Significance, & Literature

The Golem effect (Babad et al., 1982) describes the phenomenon whereby individuals will perform accordingly when lower expectations are placed on them. Recent research, however, finds that performance is raised when the credibility of those ascribing low expectations is diminished (Nurmohamed, 2020).

We investigate this manifestation of the underdog effect at the team level in the context of the National Football League (NFL), where the market is known to be highly-efficient. Although there is mixed evidence for the balanced book hypothesis (e.g., Levitt, 2005; Paul & Weinbach, 2011), the point spread nonetheless is regarded as a strong proxy of public sentiment surrounding relative team quality (Sung, 2020). Thus when underdogs outperform expectations, it reduces the perceived credibility of the wisdom of the crowd.

Data & Methods

Point spreads and game outcomes collected from sportsinsights.com were utilized in this research. We use standard Machine Learning models (ML; i.e., k-Nearest Neighbor, Random Forest, and an Ensemble of the two) as a way to assess the capacity of our credibility measures in predicting future upsets and compare the results to random walks.

An increase in a model’s capacity to predict improvements in underdog performances calls into question the Efficient Market Hypothesis as the models account for credibility fluctuations. We supplement this with a logistic regression to assess the direction and magnitude of the impact of recent upsets. In particular, we examine how major upsets and the effect of the underdog’s own upset history impact the probability of future upsets.

Results

This research is ongoing. Preliminary results from our models suggest that there may not be an effect from an underdog’s own history of upsets in a given season; however, there is a threshold effect where major upsets beget further upsets, while upsets below this threshold had the opposite effect.

Discussion & Implications

This research advances the current knowledge on underdogs in several key ways. One, we show how recent findings on the credibility of experts with respect to individuals can be extended to teams. Two, we demonstrate how under certain conditions the credibility of the crowd’s wisdom impacts underdog performance in a manner which bears some similarities to that of experts. It is noteworthy that there is a threshold effect across all major underdogs, but no evidence of a team-specific underdog effect or with respect to minor underdogs. Additional managerial and policy implications will be discussed and results of this research will be contextualized in the greater body of conversation on the efficient market hypothesis in sport.