

APPLICATION OF SPORTS RANKING MODELS TO QUALITY MANAGEMENT CAUSE-EFFECT ANALYSIS

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ABSTRACT

Sports ranking models have been used for many years to rate and rank individual players and teams in various sports. Because of the importance of the rankings and their general appeal to sports fans, much research has been published about the features and performance of the various rating/ranking methodologies. Some of these are matrix-based methods which are, in essence, an approach to comparing and rating a number of items that have had some type of interaction (a sports contest between selected pairs of them). Possible causal factors in business process quality failures can also be thought of as networks of factors, each of which has some level of cause-effect relationship with other factors. As such, the sports ranking methodologies have potential application to quality management cause-effect analysis. Three different matrix-based sports ranking methodologies are discussed and applied to quality cause-effect analysis: Google PageRank, Colley and Massey methods.