Incentives and Nonlinearities of the Wild Card Playoff System in Major League Baseball

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Exploring the incentive effects created by changes to rule and policy structure is a key issue in economics and sport and as such, holds significant implications for sport researchers, practitioners, and policy makers. The present study examines the impact of incentives and nonlinearities afforded by a major policy change in Major League Baseball (MLB) -- the Wild Card (WC) playoff structure.

Tournament theory (TT) provides the theoretical foundation for understanding how changes in sport rule and policy structures provide incentives for subsequent behavior and performance. Through the seminal work of Lazear and Rosen (1981), TT was developed to understand the impact of compensating individuals based on their relative (i.e., ‘rank order’) performance, as opposed to the more traditional, absolute level (i.e., ‘per unit’) of performance. In addition to evaluating relative performance, tournaments provide a valuable framework for evaluating the incentive effects that result from the nonlinear pay structures (i.e., where individuals who have a “higher rank” are compensated exponentially greater than those finishing with a “lower rank”) that are central to tournament-structured formats.

While TT was originally theorized to describe behavior in workplace settings, the study of tournament structures and their resulting incentive effects in sports have become increasingly popular. As noted in the literature (Abrevaya, 2004; Carrillo, 2007), sports offer an ideal setting for studying incentives because: (a) rules are well-defined, uniform, straightforward, and typically fully observable to both the researcher and the common fan; (b) sport historians are meticulous in maintaining records and, as a result, rich datasets are generally available for analysis; (c) player and organizational incentives are normally uncontroversial; (d) sport policy makers and rule designers have concise objectives selected from a subset of interrelated alternatives (i.e., to maximize the utility of their franchises, programs, leagues, etc.); and (e) executives and league policy makers have the flexibility to modify, at least to some extent, the rules and policies involved to more efficiently achieve these objectives.

In 1994, MLB instituted a major policy change by implementing the WC playoff format after expanding to 28 teams and realigning their divisions from two to three in both leagues -- thus, yielding three automatic postseason bids. As a result, a fourth playoff team was needed to create an even number of teams in the divisional and championship series. Prior to the 1994 season, American (AL) and National (NL) Leagues were divided into two divisions which afforded only two teams from each league the opportunity to participate in the postseason. According to league officials, this policy change was employed specifically to: (a) increase a team’s chances of making the playoffs; (b) enhance competitive balance and league parity; (c) create more excitement throughout and at the end of the season; (d) maintain consumer (i.e., fan) demand; and, as a result, (e) increase team revenue. In short, the WC playoff spot is given to the team in each league with the best record among second-place teams.

Although this policy change has significantly impacted the landscape of professional baseball, to date, very few studies have been conducted to specifically examine the impact of the WC playoff format in Major League Baseball (Lee, 2009; Miller & Palmer, 2008). Therefore to extend the research in this area, the present study explores the impact of this rule change by examining the impact on team spending habits due to this change in policy. More specifically, we investigate the tournament-like nature of this playoff format by relating the percentage change in opening day team payroll in the current year to: (a) the number of games behind the first place and WC winning teams (i.e., the absolute level of performance); and (b) the rank (i.e., the relative level of performance), with respect to the first place team -- both in the previous season. Consistent with TT, we predict that the increased opportunity to qualify for the post season (afforded by the WC format) creates an extra incentive for additional teams to increase their payroll.

We test these predictions using multiple regression analysis with ordinary least square (OLS) on a pooled dataset from both the pre- (1988-1993) and post-WC (1994-2003) seasons. More specifically, we investigate both the number of games behind the first place and WC winning teams (i.e., an absolute measure) “non-divisional winners” finished behind the first place team and then explore the number of games behind “non-WC winners” finished with respect to the WC winner. The analogous is then performed with rank-order (i.e., a relative measure) finish. In addition to the linear models examined, we also test for nonlinearities in the incentive effects. To test for these nonlinearities, we input additional quadratic terms for our variables indicative of team finish (i.e., games back with respect to divisional and WC winners, and rank order finish) into each of our previously constructed models.

Regression results from the present study suggest that the rank-order (i.e., relative) finish and the number of games behind (i.e.,
absolute) the league or WC winner both significantly predict changes in team payroll ($p < .01$); however, the magnitude of these estimates are much greater for the rank-order variable. Additionally, team payrolls still increased from one season to the next with the implementation of the WC playoff format; however, the magnitude of these changes in team spending lessened. Despite the decrease in total overall spending, an additional number teams displayed an increase in their payroll -- an indication of a more nonlinear compensation system. Simply stated, teams that finished in the top-three in the pre-WC years, on average, showed a significant increase in their spending ($p < .001$). Further, teams that finished in the top-four in the post-WC years, on average, also displayed a significant increase in their spending ($p < .001$).

The present study findings demonstrate that the implementation of the WC playoff format creates incentive effects and nonlinearities in Major League Baseball -- many of which are consistent with tournament theory assumptions. First, while both relative- and absolute-finish significantly predict changes in team spending, a team’s rank-order finish predicts a larger impact on these payroll differences. Second, the additional playoff positions created by the WC system have caused, on average, additional teams to alter their team payroll to improve their divisional rank -- an indication for potentially enhancing league parity. The results suggest that instituting the WC playoff format appears to have been an effective policy change for MLB and in line with league objectives. In addition to making a contribution to the sports economics literature, the present study suggests a number of future research directions -- such as examining the impact of the WC on competitive balance, media consumption, and consumer demand.