In understanding determinants of demand in Major League Baseball (MLB), the bulk of work in Sports Economics and Sport Management has largely evaluated balance effects on attendance at the league-level (Schmidt & Berri, 2001, 2002, 2004; Coates & Harrison, 2005; Fort & Lee, 2006; Lee & Fort, 2008). Further work in this area has been limited to short-term competitive balance and attendance demand issues for MLB franchises (Mechan, Nelson & Richardson, 2007). The current research adds to this body of knowledge with an evaluation of the long-term behavior of fan attendance and competitive balance at the individual franchise level, providing additional information on the determinants of attendance in Major League Baseball across markets. We follow with an evaluation of team-level attendance shocks and league policy, and an assessment of the historical impacts of competitive balance changes individually for each franchise in MLB.

The time series behavior of attendance and its relationship to competitive balance, however, must be considered carefully. If attendance data are non-stationary, then regression coefficient estimates may be biased if serial correlation is not properly accounted for (Fort & Lee, 2006). While one can take a first-difference approach, Fort and Lee (2006) suggest first determining if the data are stationary with breakpoints. As a second step in this approach, the authors suggest the use of a method introduced by Bai and Perron (1998; 2003, referred to as the ‘BP Method’) for those series found to be stationary or stationary with breakpoints. Lee and Fort (2008) pioneer the use of this methodology for MLB attendance, showing the importance of accounting for breaks in an otherwise stationary MLB league-level attendance series.

Data were gathered from multiple sources, including Baseball Reference (2009), Retrosheet (2009), Sports Business Data (2009) and Major League Baseball (2009). Data regarding standings and attendance were cross-checked to ensure accuracy. Because of the multi-faceted nature of competitive balance (Cairns, 1987; Sloane, 1976), we include multiple balance measures within our regression models mirroring those in Lee and Fort (2008). Standings data collected from the above sources were used to calculate four different measures of competitive balance as predictor variables in our analysis: Game Uncertainty (GU), Playoff Uncertainty (PU), Consecutive Season Uncertainty (CSU), and Humphrey’s Competitive Balance Ratio (‘CBR’, Humphreys, 2002).

In a precursory investigation, we find that 20 of the included 26 team attendance series (spanning more than 15 years) are trend stationary or stationary with breakpoints. We follow here with the second step from Fort and Lee (2006), employing the Bai and Perron breakpoint method to those franchise attendance series found to be stationary or stationary with breakpoints. We evaluate two multiple regression models using the BP method to detect endogenous breakpoints (level and trend shifts across time). In Model 1, we include team quality (measured by Win Percent), GU, PU, and CSU. In Model 2, CSU and PU were included as covariates with Win Percent.

We find that Playoff Uncertainty, Game Uncertainty, Consecutive Season Uncertainty and the Competitive Balance Ratio are statistically significant predictors of attendance in varying attendance series, but that the preferences for competitive balance tend to differ across individual markets. For all teams, the coefficient for Win Percent is statistically significant and positive; however, the direction of causation with respect to winning and attendance must be interpreted with caution (see Davis, 2008; 2009 for a further analysis of winning and attendance). We will discuss the economic implications of these results in further detail. Common breakpoints include those found in the Lee and Fort (2008) league aggregate analysis, often aligning with significant economic and historical events in both United States and franchise history.

These results suggest that while some fans show a preference for more balance, others seem to prefer less, and some have little response with respect to the decision to attend a baseball game (holding constant team quality). This has interesting implications for Simon Rottenberg’s seminal Uncertainty of Outcome Hypothesis (1956) and the conclusions made by Major League Baseball’s Blue Ribbon Panel: a group that was ultimately assembled to inform prospective league policy intervention. If league balance affects teams differently, then the attendance (among other demand) consequences of policy decisions made by Major League Baseball must be fully considered across all franchise markets within the league.

Beyond the perspective of a league manager, the information provided by the franchise level analysis should prove useful for team managers as well. Understanding the effects of balance on demand for attendance could ultimately influence ticket pricing and provide a further understanding of the difference in fans within each baseball market. Of course, attendance is only one aspect of demand for baseball, and we do not address the full demand function for each franchise in this analysis. Certainly, the
effects of balance on television contracts and viewership are also an important aspect in the demand for baseball. However, the additional information regarding demand for attendance provided by this team-level analysis is an important precursor to understanding determinants of a full baseball demand function for team managers and executives within their own respective market.