Competitive balance in sport has become a major research topic of interest in recent years, however most previous competitive balance studies focus on regular season outcomes only and completely ignore the playoffs, which runs contrary to fundamental notions of how fans evaluate team success (Longley and Lacey 2012). For example, if a team finishes the regular season with the best record but then languishes in the playoffs, it will likely be considered an unsuccessful season. A recent example of this could be the 2001 Seattle Mariners which set the all-time regular season record for wins in Major League Baseball with 116 but lost in the 2nd round of the playoffs. Conversely, if a team just manages to make the playoffs but then ends up winning the championship, it will likely be considered a hugely successful season. In 2012 the New York Giants (National Football League) and Los Angeles Kings (National Hockey League) won their respective championships despite qualifying for the playoffs in their final game of the regular season. These examples highlight the importance of the playoffs and that such considerations, which are not found in most previous research, should form the basis of appropriate competitive balance measures.

This study investigates whether playoff structure (in terms of the number of teams that qualify for the playoffs in a given year) can affect competitive balance in a way that impacts league-wide attendance. Within and across leagues, the number of teams that qualify for the playoffs each year has varied considerably. In MLB and the NFL, the leagues began with no playoffs and slowly added to the number of playoff teams first with a single championship game/series (two playoff teams) and now to the point where there are 10 playoff teams in baseball and 12 in football. In both these leagues, the number of teams qualifying for the playoffs has increased over time from 0% in their early history to their current points of 33.3% and 37.5% respectively. The opposite situation is true for the NHL and NBA, where the percentage of teams qualifying for the playoffs started much higher, and has slowly decreased over time through league expansion. In both of these leagues, the percentage of teams that currently make the playoffs each year is at a nearly historic low of 53.3% compared to previous maximums of 80.0% in basketball and 85.7% in hockey.

A league’s choice of the percentage of teams that qualifies for the playoffs is influenced by two competing effects. On the one hand, increasing the number of teams that qualify for the playoffs could increase fan interest insomuch as more teams will still be in the hunt for playoff spots as the season progresses. In the early history of MLB and the NFL, when there was just a single championship game/series or even no championship game at all, it can be expected that teams that quickly fell behind in the regular season standings suffered from low attendance for the remainder of the season as fans rightfully gave up on the team’s chances for that season. By increasing the number of qualifying teams in these leagues, it can be expected that more teams were competitive in terms of securing a playoff spot, increasing overall fan attendance in a given year (e.g. Lee 2009; Krautmann et. al. 2011). On the other hand, increasing the number of playoff teams shifts the importance from the regular season to the playoffs, which could negatively affect regular season attendance as fans wait until the “real” season begins in the playoffs. This notion can clearly be observed in the extreme case where the percentage of teams qualifying for the playoffs approaches 100%, completely deteriorating the significance of the regular season and likely leading to a drastic reduction in regular season attendance.

The general fan utility function is then written as: Fan utility\(U = f(\text{competitiveness for playoff qualification, regular season importance, game characteristics, team characteristics, league characteristics, market characteristics, other factors})\).

This study uses linear regression to determine which of these two competing effects on attendance of increasing the number of teams to qualify for the playoffs is greater. If the effect of greater inclusiveness creating greater uncertainty dominates, then it is expected that increasing the number of playoff teams will increase attendance. Conversely, if the effect of shifting importance from the regular season to the postseason dominates, then it is
expected that increasing the number of playoff teams will decrease attendance.

To capture the competing effects of increases (decreases) to the playoff percent creating more (less) uncertainty of outcome while also decreasing (increasing) the importance of the regular season, the playoff percent variable is modeled with both a linear and quadratic term. This allows for the effect on attendance of increasing the playoff percent to be positive for some range of playoff percentages while negative for others. The choice of control variables as well as the specific formulation of the dependent variable came from an iterative process that was used to refine the foundational regression model into the final specification used for the analysis. Of particular importance was the need to use the average attendance per game (as opposed to the total league-wide attendance) as the dependent variable in order to eliminate multicollinearity problems and to use first differencing of all continuous variables in order to remove the non-stationary effects from the time-series data. Additionally, choices were made concerning the specific measurement of control variables within the six broad categories of controls used in this analysis: stadium capacity, stadium age, ticket prices, seasonal competitive balance, strikes/lockouts, and a trend.

Using yearly data since 1950, the results show that the percentage of teams that qualify for the playoffs is a significant driver of fan interest in MLB and the NHL as measured by attendance. Specifically it was shown that while early increases in the percentage of playoff qualifying teams in MLB led to decreased attendance, moving forward an increase of the playoffs to include 12 teams would be expected to increase per game attendance by over 4,000. Similarly, while playoff structural changes have a mixed history in the NHL, in the current situation a reduction in the number of playoff teams to 14 would be expected to increase the per game attendance by over 700. In addition, the combination of the results from these two leagues may support the idea that fan interest is maximized when the number of teams that make the playoffs falls within 33-50%. At such a potential optimal point, the competing concerns of increasing the number of teams that are competitive for a playoff spot and maintaining the importance of the regular season are balanced.