Exploring Ticket Price Changes as Game Dates Approach

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1 Convergance of the average price

I have analyzed the price dynamics of tickets for Red Sox Boston baseball team games concerning their proximity to the match date. The average log price for a ticket was computed as the game date approached for the years 2009, 2010, 2011, and 2012. The findings indicate a reduction in the variance of the average price as the game date nears and convergence of the price. Notably, a substantial decline in the average price is observed in the days immediately preceding the match.

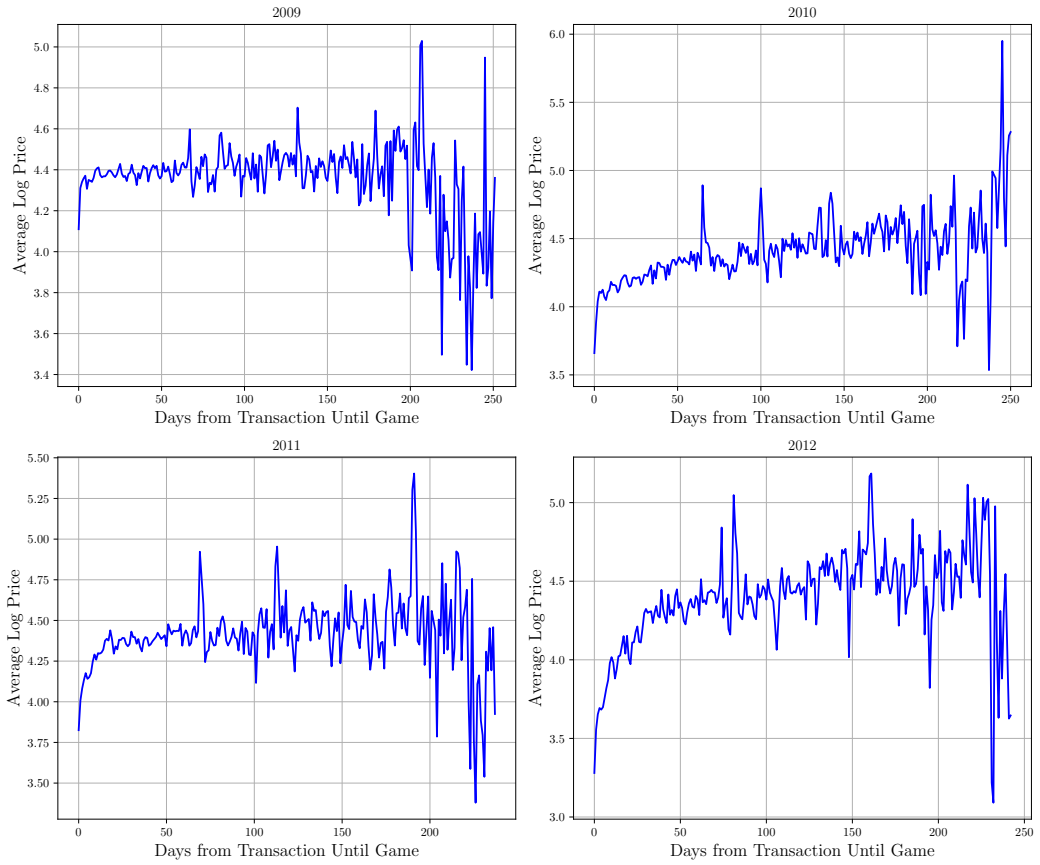

Figure 1: Ticket Price Variations Based on Match Day Proximity (2009-2012)

This phenomenon aligns with the well-established trend wherein the price of sports event tickets experiences a decrease in the final days or weeks leading up to the event, particularly in the secondary market[1]. Economic theory posits a significant drop in price on the day before the event, driven by ticket sellers aiming to maximize revenue. However, baseball match organizers introduce a price floor to prevent excessive reductions, recognizing that substantial revenue is derived from seasonal ticket holders. This strategy safeguards against the risk of losing season ticket holders for the next season, as an excessively low price floor would result in regular tickets being more economical than seasonal ones.

2 Stadium seating

The seat location within the stadium is a critical factor influencing ticket prices. The value associated with a ticket is intricately connected to its corresponding seating position. If we analyze the average log of the ticket price by stadium section type as the game date approaches, we can see that the price for individual sections is homogenous throughout time. That is, we observe the stratification of average price by section type through time. In any serious further analysis of the ticket process, this should be taken into account when formulating the methodology (e.g. using stratification or clustering techniques when dealing with this type of problem)

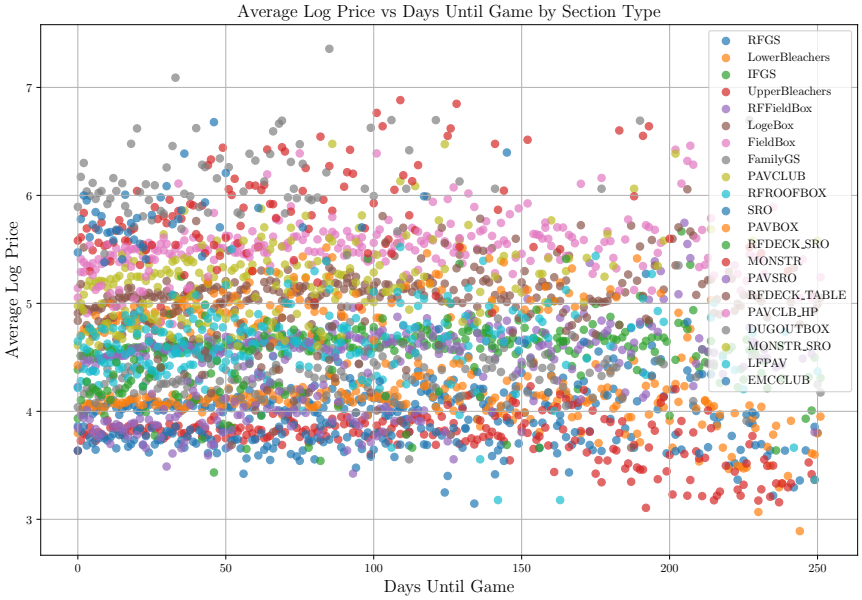

Figure 2: Stadium Seating and Ticket Prices Over Time

3 Day vs Night games and Weekend games

As most people work nine to five, it is reasonable to expect that the demand and subsequently price for the ticket is higher on average for those games organized later in the day and games organized at weekends. Data for 2009 shows that during the whole period between the start of the sale of the tickets to the game day average ticket prices for the games that play on weekends are more expensive than those played during the work week. On the contrary, when we graph ticket prices for the games played in the evening and games played earlier in the day we see no clear pattern.

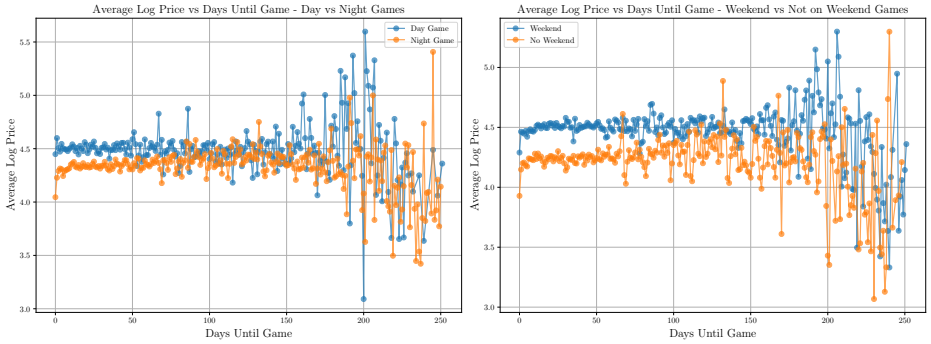

Figure 3: Ticket Prices: Day vs. Night and Weekend vs. Workday Games in 2009"

4 Part of the season

The baseball season typically spans seven months, commencing from April through to October. I have categorized the datasets into three segments: Early Season (April–May), Mid-Season (June–July), and Late Season (August–October). Anticipated patterns may emerge as more crucial games unfold later in the season.

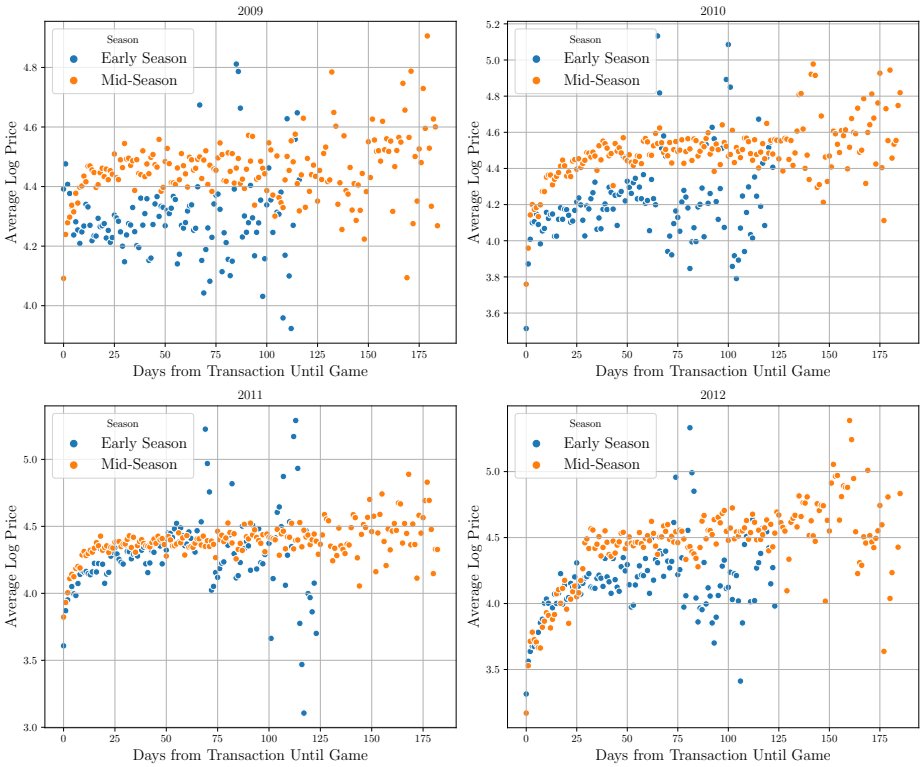

Figure 4: Ticket Price Variations: Early Season vs. Mid Season Games (2009-2012)

Upon analyzing the graph, it becomes evident that, on average, ticket prices remain higher (or the same) throughout the Mid-Season games compared to the Early Season matches. This observation underscores the impact of the season's progression on the perceived value and demand for tickets.

5 Addition notes

People buy tickets because they want to witness the game. Consequently, if one game is deemed more desirable than another, it will, on average, command a higher ticket price. Several determinants contribute to a game's desirability, including team standings, the historical performance of both teams and their opponents, the playoff status of the opponent from the previous year, and various environmental factors. These environmental considerations encompass elements such as temperature forecasts and the likelihood of rain on the match day.

Further studies could undertake regression analysis, examining all relevant variables in relation to the stratified nature of ticket prices.

References

[1] Drayer, J., Shapiro, S. (2009). Value determination in the secondary ticket market: A quantitative analysis of the NFL playoffs. Sports Marketing Quarterly, 18, 5-13.

[2] Shapiro, S.L., Drayer, J., An examination of dynamic ticket pricing and secondary market price determinants in Major League Baseball. Sport Management Review (2013)