Local Team Playoff Prospects and Out-of-Market Television Viewership in the NFL

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The extent theory on competitive balance in professional sports leagues has repeatedly hypothesized and tested how league competitiveness impacts demand for local market games (e.g., Knowles et al, 1992; McDonald & Rascher, 2000; Peel, & Thomas 1992, 1996; Whitney, 1988). Expressed as a conditional statement, if a league is more competitive, then local demand will increase. In this research we consider the conversion of that conditional, if a local team is more competitive, then demand for other league games will increase. We explore this in the context of the National Football League (NFL), where, like many major leagues today, the number of league games offered to consumers via various media outlets has vastly increased while the quantity of games actually contested has remained constant, signifying the growing importance of interest in out-of-market games. Specifically, this research estimates the change in broadcast ratings for out-of-market regular season and playoff contests attributable to whether the local franchise is still active in the championship race. While this research is still in progress, preliminary findings suggest that interest increases when the local franchise is active in the playoffs; our investigation of the analogous effect during the regular season is ongoing.

Review of Relevant Literature

It has generally been suggested that more balance creates higher levels of uncertainty. These concepts have been fundamental to the empirical literature in sports economics since Rottenberg (1956). Based on this relationship, theoretical analyses of competitive balance have posited that the greater the competitiveness within a league, the greater the demand for the league (e.g., Rottenberg, 1956; El-Hodiri and Quirk, 1971; Demmert, 1973; Noll, 1974; Fort and Quirk, 1995). Because the proxy of demand most commonly utilized has been attendance, a measure consisting primarily of local interest in local games, the relationship often measured by league competitiveness reflects how league-wide balance affects local interest.

Complementing the previous line of inquiry is the notion that a team’s level of competitiveness within the league will impact its own game-level demand (Jennet, 1984; Burkitt and Cameron, 1992; Baimbridge, Cameron and Dawson, 1996). A limitation in these studies has been the inability to directly measure the competitiveness of the local market team on demand for other league games. However, recently viewership quantities have been studied in a wide array of leagues and sports using television ratings as opposed to attendance. The settings examined include European club football (Alavy, Gaskell, Leach, & Szymanski, 2010; Buraimo, 2008; Buraimo & Simmons, 2009; Johnsen and Solvoll, 2007; Forrest, Simmons and Buraimo, 2005), New Zealand Rugby (Yang and Kumareswaran, 2009), Ultimate Fighting Championship (Tainsky, Salaga, & Santos, 2013), National Basketball Association (Mongeon & Winfree, 2012), National Football League (Paul & Weinbach, 2007; Tainsky, 2010; Tainsky & McEvoy, 2012), Tour de France (Van Reeth, 2011) and NASCAR (Berkowitz, Depken, and Wilson, 2011). Only one example exists of how local team interest may impact demand for other league matches (Tainsky & Jasielec, in press). Results showed a positive association between local team quality and out-of-market game ratings. The present research extends the examination of that underlying phenomenon in combination with those beginning with Jennet (1984) who have studied team competitiveness with respect to league position. Given the results of the previous research, we hypothesize that when a local team is active in the playoff race (i.e., regular season) or playoffs (i.e., postseason tournament), interest in out-of-market games will be increased in that market.

Data and Method

The NFL is divided into two conferences, the American Football Conference (AFC) and National Football Conference (NFC). League delineation along conference lines extends to both the playoff structure, where the champions of each conference meet in the Super Bowl, and the league’s television coverage, as networks bid for...
both regular season and postseason broadcast rights to either the AFC or NFC. The data utilized represent
postseason games following multiple seasons in Nielsen Local People Meter (LPM) markets. The data include ratings
from all markets within the largest LPM markets that are home to a single NFL franchise.

For the playoff analysis, there are 890 observations. LogHHRatingAvg is the dependent variable and represents the
logged average Nielsen rating for a live NFL playoff broadcast in a given market. A single Nielsen rating point is
equivalent to one percent of the households in a market tuning in to a broadcast.

We make adjustments to the traditional model of attendance demand in sports based on the unique nature of
television viewership. The estimating equation is given as follows, in which i, j and t represent local market, game and
year characteristics, respectively:

\[
\text{Log}(\text{HHRatingAvg})_{ij} = B_0 + B_1(\text{AbsClosingLine})_{ij} + B_2(\text{TotalWinPct})_j + B_3(\text{log}(\text{TotalAge})_j + B_4(\text{log}(\text{Income})_{it} + B_5(\text{DivisionalRound})_{ij} + B_6(\text{ChampionshipRound})_{ij} + B_7(\text{PrimeTime})_{ij} + B_8(\text{MarketIndicator})_{ij} + B_9(\text{LocalActive})_{ij} + B_{10}(\text{Same}
\]

LocalActive is a dummy variable denoting whether the local team was actively participating in the playoffs as the out-
of-market game was being contested. SameConference is equal to unity when the playoff game features teams from
the same conference as the local franchise. This in itself simply measures the potential increased interest attributable
to conference preference and is introduced to prevent overestimation of the next variable of interest—the
interaction of LocalActive and SameConference, which measures the previously described effect of potential
increased interest for conference playoff games when the local team is active. Ordinary least squares (OLS) was used
to estimate the NFL postseason television ratings in local markets for out-of-market contests. Standard errors are
robust to heteroskedasticity and clustered by market. Results were robust to specifications. The regular season model
will follow a similar design.

Results and Discussion

Support exists for increased consumer interest in out-of-market contests when the local team was competing in the
NFL postseason. LocalActive and the interaction of LocalActive and SameConference both show a significant and
positive impact on local ratings. If the local team was still active in the playoffs at game time, then television
viewership in that market increased by 8.74% \([\exp(0.08382) = 1.08743]\) for the out-of-market game. Furthermore,
there was an additional 4.91% premium for the out-of-market playoff game when it featured teams from the same
conference as the local franchise and the local team was still active in the playoffs. These two results support the idea
that local competitiveness spills over into league-wide interest. All control variables were significant at the 1% level.

A preliminary model for the regular season data likewise showed increased ratings for out-of-market games when the
local team was active in the playoff race (\(p=0.026\)).

The findings have profound league implications as the value of television broadcasting contracts continue to rise and
the growing number of television substitutes, especially live sports programming, continues to increase. As the league
considers playoff expansion, this research demonstrates how increasing the number of teams would not only yield
increases in the quantity of viewers watching the local team’s game, but how fans in those active markets will also
increase consumption of other league games. The centrality of viewer interest in their local team clearly remains
present even in the face of mounting out-of-market game availability.

Conclusion

We extend the literature hypothesizing the impact of competitive balance in professional sports leagues to the
context of local interest in league games. We follow on the well-established construct that enhanced levels of “league
competitiveness” affect local market demand by hypothesizing its mirror-image—that a competitive local team also
has the ability to influence the consumption of contests taking place outside of that local market. Additional
theoretical and managerial implications will be discussed, including the impact of the proposed change in the NFL
playoff format based on our analysis.