Demand for Non-local Game Telecasts: Conventional Demand Shifters and Local Team Influence

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Introduction:

Research on demand in professional sport has focused largely on the popularity of home team games, in large part due to the convention and limitations of using attendance data. The use of television ratings data in their place allows researchers to estimate demand for other sports programming, including in the visiting team’s market, games shown in markets without teams, and in league markets but not featuring a local team (hereafter, non-local games). This study is inspired by the vast demand literature in sports economics, as reviewed by Borland & MacDonald (2003), in addition to the equally extensive attention paid to programming optimization in media studies (Goodhardt, Ehrenberg & Collins, 1987; Rust, Kamakura, & Alpert, 1992; Srinivas, Reddy, Aronson & Stam, 1998; Webster, 1985 & 2006) to measure the popularity of non-local games. The research examines how traditional demand shifters influence game ratings as well as how the influence of the local team is felt, even when it is not featured in the game.

Purpose:

The objectives of this research are to estimate demand for non-local telecasts in markets with teams. To that end, the following questions are posed:

1) How do traditional demand shifters influence television ratings for non-local games?

2) How does the relationship between the local team and competing non-local teams affect ratings for non-local games?

3) How does the presence of a simultaneous or adjacent telecast featuring the local team affect ratings for non-local games?

4) How does the performance of the local team in games broadcast just prior to a telecast affect ratings for non-local games?

Methods:

Data were collected on National Football League (NFL) regular season games during 2006 and 2007. Four NFL cities were selected at random for this preliminary research.

The following variables represent the traditional demand shifters included in the model. HomeQuality and AwayQuality incorporate lagged and current season winning percentage. HomeFranchiseAge and AwayFranchiseAge correspond to the number of years a team has spent in its current market. Indicator variables include Cowboy, denoting whether the Dallas Cowboys, “America’s Team,” was one of the participating teams, PostThanksgiving, if the game was contested in the final month of the regular season, WeekOne, if the game was held in the opening week of the season, Divisional, if the game pitted teams in the same division, and AltGame, if a different NFL game was telecast simultaneously on another network.

In addition to those variables, factors estimating the local team influence were added to the model. Those include the indicator variables DivisionRival, if at least one of the competing teams was in the same division as the local team, and AltLocalGame, if a game featuring the local team was telecast at the same time. The final group of variables—LocaWinBeforeSameChannel, LocalLossBeforeSameChannel, LocalWinBeforeDifferentChannel, LocalLossBeforeDifferentChannel, LocalAfterDifferentChannel, and LocalAfterSameChannel—measure the effect of local game broadcast and performance adjacent to the non-local game.
The data were run via Ordinary Least Squares (OLS) and Linear Mixed Model (LMM), where the Information Criteria preferred a Compound Symmetry covariance structure relative to the simple residual structure of OLS. The best model selected via backward selection is identical to that of the best OLS model and the parameter estimates and p-values are similar in both models, confirming the weak within-market correlation found by intra-class correlation diagnostics.

Results:

This research is ongoing, however preliminary data may provide early insight into trends across league programming. Fourteen of the seventeen variables were included in the final model and significant at 5%, eleven at 1%, and explained over 62% of the variation. Among the traditional demand shifters, all included in the final model show coefficients in the expected direction. HomeQuality, AwayQuality, HomeFranchiseAge, AwayFranchiseAge, Cowboy, and PostThanksgiving were positively associated with ratings while AltGame negatively impacted ratings. Among the variables aimed to capture the local team influence on non-local game ratings, DivisionRival positively impacted ratings while AltLocalGame negatively influenced ratings. The inheritance effect parameter estimates are particularly interesting. LocalAfterSameChannel was positively associated with ratings, but LocalAfterDifferentChannel was eliminated in the selection process due to its insignificance. LocalWinBeforeSameChannel and LocalLossBeforeSameChannel were both positively associated with non-local game ratings, however the size of the effect was quite different (+4.74 versus +2.44). LocalWinBeforeDifferentChannel and LocalLossBeforeDifferentChannel were both negatively associated with non-local game ratings, but, again, the size of the effect was different (-1.36 versus -3.05). The combination of these comparisons implies the presence of a channel effect and a local team winning effect.

Discussion:

Although these results are preliminary, they provide support to the notion that many of the same factors influencing demand for local team telecasts play a role in the consumption choices of sports fans for non-local games. Even more interestingly, fans seem to be highly influenced by their local team in these choices even though it is not represented in the game itself. The simultaneous broadcast of a local game has a significant negative impact on ratings, while the presence of a division rival had the opposite effect. These results also show a strong inheritance effect in professional sports broadcasts both in terms of lead-in and lead-out programming, with fans highly influenced to view telecasts adjacent to their local team’s game. This may give pause to NFL and network administrators in continuing their ardent enforcement of the league’s blackout rule, that games not sold out prior to the contest cannot be viewed in the local market. The uniqueness of sport allows us to also consider the outcome and presumably the contentment of the viewer with a preceding, related telecast. In this case, the local team winning was a positive indicator of ratings for subsequent similar programming. If this result holds across the entire league, then this would invite further exploration of satisfaction as a predictor of subsequent viewership choices across sports and other programming genre.

References:


