Causality between Television Viewership and Game Attendance: Empirical Evidence from the 1990 to 2017 World Series

Sukjoon Yoon, Texas A&M University
Eun Yeon Kang, Kutztown University

Finance/Economics - Economics (Professional Sport) Saturday, June 9, 2018
Poster 9:20 AM
Abstract 2018-285 Room: Halifax

Background and Significance

Major League Baseball (MLB) is a key professional sports league in the United States with high television (TV) viewership and ratings in local markets (Brown, 2017). However, each year fan attendance at live MLB games has steadily declined (Bouris & Gomez, 2016). While the total revenue from professional sports comes from a range of channels, game attendance and TV-related deals (e.g., advertising, endorsements, etc.) are still substantial sources of team income (Mongeon & Winfree, 2012). Yet many professional teams struggle to sell tickets, especially now that fans are able to stream games to their living room TV, computer, or smartphone. Several studies have identified game attendance as a dependent variable affected by a number of relevant factors, but research has yet to determine if TV viewership influences game attendance. Therefore, this study will focus on the direction of causality between the two.

Review of the Relevant Literature

Consumer demand for live sports has been the subject of a great deal of empirical research over the years (Brown & Salaga, 2017). Traditionally, game-day attendance has been employed as a suitable proxy for demand (Borland & MacDonal d, 2003) due to the significance of gate receipts to the total revenue structure. While game attendance is still a key factor in team income, TV broadcasting revenue is extensive and continuing to grow (Fittipaldo, 2015); today’s sport fans seem to prefer live streaming to attending a sporting event. Since Sloane’s (1980) study regarding the potential substitution of television for event attendance, many researchers have empirically calculated the potential impact of TV over time on the demand for tickets (Baimbridge, Cameron, & Dawson, 1995; Fizel & Bennett, 1989; McEvoy & Morse, 2007).

Recent scholars have focused on TV ratings as a means of estimating demand in a wide range of sport leagues. TV ratings offer a measure of the number of viewers (i.e., TV viewership) for sporting events (Carney & Fenn, 2004). Accordingly, TV viewership has also been used as an alternative proxy for live sports (Salaga & Tainsky, 2015; Tainsky & Stodolska, 2010) because TV viewership is a likely means of capturing individual preferences (Paul & Weinbach, 2007). Much research has investigated broadcasting viewership preferences within the context of European football (Benz, Brandes, & Franck, 2009; Buraimo & Simmons, 2009), NCAA college sport (Kang, Salaga, Tainsky, & Juravich, 2017; Salaga & Tainsky, 2015), and North American sport leagues (Paul & Weinbach, 2007; Tainsky, Xu, Salaga, & Mills, 2013).

Based on the above literature review, there is relatively clear evidence of a causal link between TV viewership and game attendance, but there are two key reasons why the existing research is insufficient. First, it remains to be seen if this causal link represents a clear consensus on the nature of the relationship. Second, it is unclear if the causal relationship can be observed in panel data that include more information across teams and time horizons. Therefore, the specific research questions were developed as follow:

RQ1: Is there a causal linkage between TV viewership and game attendance, and, if so, what is the direction of causality?
RQ2: To what extent is TV viewership (game attendance) driven by game attendance (TV viewership)?

Empirical Approach and Data

The current study will utilize an econometric approach to determine the causality between TV viewership and game attendance. We will apply the Granger causality technique (1969) with fixed coefficients proposed by Hurlin and
Venet (2001). The Granger causality test identifies the causal effect between a set of variables by using panel data to test for predictability. The virtue of employing panel data is that we can fully employ cross-sectional and time-series variations, and improve the efficiency of the Granger causality test. Thus, our empirical model will examine the causal effect by employing a technique that has only rarely been used in sport management literature.

We will analyze unbalanced panel data for TV viewership and game attendance from the World Series that includes information on 24 teams and ranges from 1990 to 2017 (an annual time series). The data will be compiled from a dataset publicly available from baseball-almanac.com.

Expected Results
The data collection is ongoing and the analysis will conclude in early January of 2018. More specific results, discussion, and implications will be offered in the presentation. The expected findings from this research will make several contributions to the existing sport literature: (1) it will provide future research directions for creating and confirming the foundations of econometric estimations; (2) comprehensively analyze the possible causality between TV viewership and game attendance; and (3) suggest that sport organizations and teams grasp and apply market demand models of attendance to sporting events.