The Relationship Between Attendance at Major League Baseball Games and Social Media Use

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The importance of the growth of social media has received great attention from scholars across many academic disciplines (Pedersen, 2012). It is noted in the literature of communication technologies, there have been a wide range of areas covered within this specific academic focus, and social media is one of the current frontiers (Clavio & Kian, 2010; Kassing & Sanderson, 2010, Pedersen, 2012). In marketing, social media is considered a new important medium and method through which to promote and market sport products and services (Mangold & Faulds, 2009; Williams & Chinn, 2010), as well as to connect various stakeholders within the sport industry. Social media has also been focused upon in regards to its importance in communications (Conrad & Poole, 2012) and its far reaching sociological impacts in sport worldwide (Wilson, 2007). One area where social media has not been fully included within research has been the economic and financial examination of the sport industry. Pedersen (2012), notes the need for scholars from diverse settings to approach communication technologies and media to continue exploring this vital area of the sport industry. With this in mind, this research study focuses on a conflux of communications and economics to examine the importance of social media usage and its relation to attendance at Major League Baseball (MLB) games.

The sports economics line of research has emerged from the seminal theoretical works of Rottenberg (1956), Neale (1964) and El Hodiri and Quirk (1971). This group of literature, and the subsequent lines of research which followed, have examined broad topics within sports economics from both a theoretical and empirical standpoint. A large portion of this research has focused upon the demand for sport (Borland & Macdonald, 2003). In the demand for sport literature, the majority of research studies have considered how various factors have affected the demand for attendance at sporting events. In this, research has considered match-level (Whitney, 1988; Peel & Thomas 1996; Price & Sen, 2003), seasonal-level (Noll, 1974; Szymanski, 2001; Soebbing, 2008), and long-run (Schmidt & Berri, 2001; Humphreys, 2002) demand for attendance at sporting events. Through these and other investigations, a better understanding of the demand for live attendance at sporting events has evolved.

For the purpose of this research, the relationship between various social media measures and attendance were considered in creating an attendance model to estimate the relation that Twitter usage has on MLB games. Social media use has been employed in prior sports economic studies focused on social media and its relation to betting markets (Feddersen, Humphreys & Soebbing, 2013), where Facebook “likes” were used to track interest in sport franchises. For the purpose of this current research, daily attendance data was collected for every franchise in MLB in 2013, from the All-Star Break in early July, through the end of the regular season at the end of September. Data from Twitter was also collected daily through the software program NodeXL, which can be employed to collect various types of social media data. For this research, the Twitter variables of: Followers, Tweets, Retweets, Favorites, and Days on Twitter were all collected. In all, the short-run panel dataset for everyday in the second half of the season yielded just over 3,000 observations. In addition to attendance and Twitter use data, the data collection process also included variables to control for market factors such as Metropolitan Statistical Area (MSA) income and population, control variables such as the day of the week and other scheduling factors, dummy variables for which league the franchise was in, as well as other variables to control for other factors.

Two models were run for the purpose of this research. The first model employs attendance as a dependent variable in a classic attendance model. In this first model, social media variables are included alongside the usual determinants of demand (as outlined by Borland & Macdonald, 2003) to estimate demand for MLB attendance. The second model uses the number of followers on Twitter as the dependent variable. In this model, the regression results are used to try and model why individuals follow the Twitter account of an MLB franchise. In this second model, variables denoting the previous day’s performance of a franchise and the number of games out of a playoff spot were included along with the market and franchise control variables.
Results for the first model employed in this research indicate the importance of many factors in determining short-run attendance at MLB games. Included in these factors were certain social media use variables as well as scheduling variables. The findings from the second model similarly indicated social media use and factors as having an important role in contributing to the “demand” or interest level of individuals in MLB franchise Twitter accounts. These results highlight the importance of social media in relation with fan interest in attending and interacting with sport organizations. Additionally, as online and digital content have become more prevalent, and a larger source of revenue for sport organizations, it is of vital importance for managers to understand the implications that running social media accounts can have. From this, future research could consider these implications to a deeper level, and also may consider the link and relationships which exists between social media use, and consumption of sport through television, pay-per-view, or other digital broadcast methods. Further research could also examine and model the relationship between sport organizations and other forms of social media to see if the variables which proved significant for Twitter, also hold up for other media such as Facebook. In conclusion, this research attempts to make groundbreaking work in displaying the relationship between attendance and social media for sport organizations, as well as modeling the use of social media in other sporting contexts.