An Analytic-based Strategy for College Sports Ticket Sales and Management

Emergent Research Forum

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Abstract

Sports analytics has gained significant popularity to support athletic organization's business and field operations such as enhancing talent identification, player recruitment, player development, training priorities, coaching, game tactics, team selection, injury management, fan/customer relationship management, etc. Through a qualitative case study approach, this study examines a regional university's athletic department's current status on data collection and analysis to enhance their ticket sales and marketing management. In-depth qualitative interviews are being conducted to better understand the current process and their desired goals in the ticket sales and marketing management area. In future, we intend to extend the study by using quantitative methods on recent five years' worth of season ticket sales data to provide insights and in that process additional recommendations will be provided to enhance data collection and subsequent analysis.

Keywords

Sports Analytics, Customer Relationship Management, Customer Acquisition, Customer Engagement, Ticket Sales, Marketing Management.

Introduction

The use of analytics to create value for its stakeholders and extract value in return to organizations is currently on the ascend (Philips-Wren et al. 2015). Organizations are proactively responding to consumer needs by collecting and analyzing massive amount of consumer data in order to improve their products and services. To gain competitive advantage and improve performance outcomes, the sporting industry is employing analytic techniques to study patterns and trends for effective prediction of future consumer behavior (Ofoghi et al. 2013).

While sports operations related to on the field games are critically important for successful outcomes, it is crucial that business aspects of sports operations, such as: game marketing, customer relationship management, fan engagement, ticket sales, etc., that are important to increase revenue are not ignored. Several studies have explored customer relationship management strategies by businesses to enhance customer engagement and retention to boost sales and increase profits (Husted et al. 2015; Kim et al. 2013). However, not enough attention has been paid to the sporting industry in terms of engaging fans and improving their existing relationship based on how they spend their time, money and other valuable resources related to games.

Motivated by this gap in the existing literature, this exploratory study aims understand the trend in how a university has performed over the past years in season ticket sales, and what they can do to improve the ticket sales in the future. Studies have shown that effective management of customer relationship and engagement are vital predictors of sales growth (Neff 2007) and profitability (Voyles 2007). However, to
our knowledge, literature has not focused on how the sporting industry is maintaining quality relationship and effectively engaging its fans by making sure that products and services being offered meet their needs and expectations. This study therefore seeks to fill the gap identified in the literature by answering the following research questions: (1) how does an athletic department manage the collection and use of seasonal ticket sales data? (2) what challenges do they currently face in collecting, storing, analyzing, and utilizing their data? (3) how does the use of analytics inform and influence decisions related to allocation of money for marketing and advertising college sport events? (4) what critical factors are to be considered for future prediction of ticket sales based on past information?"

We propose to address these research questions through a two-stage study approach. Stage 1 of the study is currently being conducted through a qualitative case study methodology and then continued in the future with stage 2 study which will mainly apply quantitative methods. The qualitative study is expected to help answer the “what” and the “how” forms of our research questions whiles the quantitative study will help confirm our findings from the qualitative study. Benbasat et al. (1987) and Lee (1989) recommend the use of case study methodology for exploratory research. Since sports analytics is an emerging research area, we begin with a qualitative research approach to conduct preliminary analysis to understand the case of how a given regional university can apply analytic techniques to explore marketing opportunities that is informed by the past sales data.

The study draws on prior work of Swift (2002) customer relationship management (CRM) and Andren’s (2010) customer ecosystem model (CEM) to address the research questions. CRM processes, models and frameworks have repeatedly been used in understanding the antecedents of effective relationship management and engagement improvement (Husted et al. 2015; Kim et al. 2013). We therefore plan to apply theories and methods related to CRM & CEM to study how the athletic department’s efforts to manage their marketing and tickets sales can be improved.

This study will contribute to the current literature in the following significant ways. First, our study attempts to fill a void in illustrative case studies in the use of business analytic strategies to assist a regional university’s athletic department in its marketing decisions by focusing more on how best to engage their fans in order to increase future ticket sales. Since engagement is intuitively and logically a critical success factor to business gains and consumers’ continuous satisfaction and loyalty, a rigorous development and validation approach through analytics should prove beneficial.

Background & Related Literature

Economic and social importance related to sports participation has increased in popularity since the 1970s (Lera-López & Rapún-García, 2005) with an exponential increase in the last five decades. In reaction to the growing opportunities in sporting business, companies and institutions are constantly providing variety of sports products, shows, and other related services to this booming market all over the world in order to increase their revenue (Andreff & Andreff, 2009). As result, advanced analytic techniques are currently being rapidly deployed in sports. The major areas of application of analytics includes player profile selection and development; training and practice; injury prevention; play improvements; schedule optimization; game theory; managing the legal environment; Finance and marketing related activities such as customer acquisition, conversion, relationship building, and retention.

Although there several prior studies devoted to investigating customer relationship management and customer retention, there has been relatively lesser degree of focus on customer acquisition particularly in the sports industry (Alamar 2013). Regarding customer acquisition, Blattberg and Deighton (1996) present managerial approach to balance resource allocation between acquisition and retention, while Reinartz et al. (2005) developed an empirical modeling framework to achieve the same objective by extending the work of Thomas (2001). Villanueva et al. (2008) also showed that customer acquired through marketing efforts are about half as valuable as those acquired through word of mouth. Recently, a study by Voss and Voss (2008) was conducted to basically reemphasize the importance of acquisition by basically arguing that customer acquisition strategies become more effective than retention strategies as the number of competitors increases. Moreover, Arnold et al. (2011) showed that a firm’s customer acquisition orientation (as compared to retention orientation) enhances the performance of its radical innovation.
Owing to the limited research on sports customer acquisition strategies, this study is being conducted with the aim of contributing to the existing literature by identifying the important data points the sporting industry is currently not collecting about their customers. Recent development in the literature has revealed that business are currently using advanced analytics techniques to better understand their customer and customize the products and services that best meet the needs customers (Alamar et al. 2014).

Analytics implementation varies widely across different industries. As such, sports clubs and other organizations vary widely in their enthusiasm towards, and usage of, analytics (Alamar 2013). Although the underlining motive behind the adoption of analytics may vary, statistics shows interest in the use of analytics in sports is significantly high. For instance, according to Dhanrajani (2015), in National Basketball Association (NBA) the percentage off teams employing analytics professional consultants is 80% as opposed to only 56% for National Football League (NBA) (see Figure 1).

Effective application of analytics has been shown by several researchers (e.g. Davies, 2002; Milano & Chelladurai, 2011) to have significant business impacts such as cost minimization, sales improvement, consumer engagement, effective customer acquisition and relationship management, etc.

Andren (2010) proposed a framework called the Customer Ecosystem Model (CEM) which basically represents a holistic approach to understanding customer lifecycle The CEM comprises of four stages – acquisition, conversion, upsell and retention. We adopt the CEM model and compress it into 3 stages in the contest of sporting business (Figure 2). Our main focus is on the initial customer acquisition stage since, surprisingly, the sporting industry is currently far behind other industries such as retail, finance, etc. at this stage due to less application of analytics to better understand customer behaviors and orientation (Davenport 2014).

This study focusses on the domain of customer acquisition (stage 1 of the CEM) and applies analytics techniques on both qualitative and quantitative data to identify interesting and more influential data points or variables that a university’s sports department needs to be collecting, storing, and analyzing in order to grow their customer base and subsequently improve their financial performance.
Research Method

We propose to address our research questions through a two-stage study approach. The first stage is currently being conducted through a qualitative case study methodology and then continued in the future with the second stage study which will mainly apply quantitative methods. The qualitative study is expected to help answer the “what” and the “how” forms of our research questions whiles the quantitative study will help confirm our findings from the qualitative study.

Thus, by using qualitative case study approach at the initial stage of this study, we hope to understand what the men’s basketball department is currently doing in terms of data collection, how are they using this data to inform future sales, and what basic challenges they are facing in the collection and use of the data. Based on the insight from the qualitative study, we will follow up with a quantitative study by employing analytical, statistical, and data mining methods such as clustering, classification, rule mining, and relationship modeling to try to understand how ticket sales has performed over time.

Data Source

Qualitative data is currently being collected through the use of semi-structured interviews and observation of sports fans during one of the university’s men’s basketball game against another visiting university. A series of weekly meetings were arranged between the researchers and two of the university’s sports employees – the Director of Ticketing and Revenue Generation (DTRG) and the Senior Associate Administrative Director for External Operations (SADEO). Multiple weekly meetings (Table 1) were held in the office of the DTRG to conduct interviews and ask for possible sources to existing secondary data. Each of the meetings were within the range of 30-60 minutes and during each meeting, responses from interviewees were captured on paper and audio recording with permission for future analysis.

<table>
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<th>No.</th>
<th>Interviewee</th>
<th>January 28</th>
<th>February 4</th>
<th>February 11</th>
<th>February 18</th>
<th>March 17</th>
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Table 1. Preliminary Interview Dates & Duration for each Interviewee

From the interview, it was discovered that the athletics department (AD) of the university has collected five years of data on season ticket holders (STH) starting from 2011/12 basketball season until date. Permission to access this data set was granted and initial preliminary data screening revealed that the key data points in the dataset include STH zip codes by season and lifetime giving per STH by zip code for 2015/2016 only. It is apparent that the types of data that can provide meaningful insights to the AD is not being collected. Hence, the objective of this study is to come up with an effective data management system and strategy for the sports department. This is in progress and we hope to have results of the metadata and analysis of existing data at the conference.

Proposed Analysis

We will analyze our qualitative (interview) data by transcribing the interview responses, identify common themes that emerge as very important needs or issue raised by each of the interviewees. Based on our findings, guidelines and action plans will be recommended to enable the sports department consider collecting more data points or variables as possible, and also ensure appropriate documentation of their meta-data information is in order to increase the accuracy of future predictions.

Expected Contribution

The Athletic department intends to adjust its marketing plan for the Men’s Basketball program based on the findings of this study. The zip codes with the greatest representation in total numbers and lifetime giving will be targeted more frequently in the advertising campaigns, while zip codes with the least representation and lifetime giving will be less frequently targeted in the advertising campaigns. This will be the University’s first application of Sports Analytics to Ticketing and Marketing.
Conclusion & Future Research Direction

This research-in-progress proposes to use multiple research approaches - qualitative methods and advanced analytic (quantitative) methods - to address the research questions by using interview data and existing secondary data of past years’ (2011-2016) ticket sales of a university’s men’s basketball games. The study’s fundamental objective is to basically understand past sales performance from the existing data and use that prior information to predict future performance subject to effective implementation of any recommendations or interventions that will be suggested.

REFERENCES