Determinants of the spending of sporting tourists: The case of attendees at professional basketball

Jesyca Salgado-Barandela[a], Ángel Barajas[b,*], Patricio Sánchez-Fernández[a]

[a] Departamento de Economía Financiera y Contabilidad, University of Vigo, As Lagoas, 32004 Ourense, Spain
[b] School of Economics and Management, National Research University Higher School of Economics, Kantemiroskaya, 3A, St. Petersburg 194100, Russian Federation

ARTICLE INFO

ABSTRACT

This article analyses the determinants of attendees' tourism spending at professional basketball matches during the 2012/2013 season. For this purpose, it applies a linear quantile regression and considers the effect of specific sports event variables which have rarely been assessed in this type of study. Empirical results confirm that the determinants of expenditure have a different influence depending on the spending level. Individual spending is principally influenced by the origin of the attendees as well as by several other sports factors such as the time the match takes place, the admission price, or the sporting level of the rival team. The study establishes two levels of spending to identify the different behaviors that correspond to each of the factors under study. The findings could provide a useful input into tourism strategies related to the hosting of sport events.

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1. Introduction

The analysis of the individual spending behavior of visitors to specific destinations is increasingly becoming a topic of interest, according to Brida, Disegna, and Osti (2013), Craggs and Schofield (2009), Dolnicar et al. (2008), Hung, Shang, and Wang (2012) and Nicolau and Más (2005). Tourism demand is mainly analyzed using a macro approach, in which the unit of analysis is a set of aggregated data. These kinds of studies use economic indicators such as the influence of the tourism sector on GDP, GVA or employment at the national or regional level. Individual spending behavior and the sociodemographic and economic factors that affect spending patterns (i.e., the micro approach) have been studied to a lesser extent (Brida et al., 2013; Fredman, 2008; Laesser & Crouch, 2006).

Reviews of the previous literature on tourism demand including the works of Lim (1997, 2006) and Crouch (1994) reflect that there is a lack of studies employing micro-economic analysis. Lim (2006) explains that only 8 out of the 124 articles studied employed

this type of analysis. Wang and Davidson (2010) indicate that the first studies concerning demand at a micro level were carried out by Mak, Moncur, and Yonamine (1977). Subsequently, this type of work aroused the interest of researchers once again in the 1990s. As of then, interest increased rapidly, especially at the turn of the century.

In the case of sports tourism, the same situation is observed. Studies have neglected the specific aspects of products and services and have focused on economic impact and the use of aggregated data. It therefore now seems reasonable to also focus on understanding the spending behavior of sports tourists who come as spectators (Brida, Schubert, Osti, & Barquet 2011; Cannon & Ford, 2002; Yusof, Shah, & Geok, 2012) and participants (Dixon, Backman, Backman, & Norman, 2012; Downward, Lumsdon, & Weston, 2009; Gibson, 2005).

Mok and Iverson (2000) explain that the growth of international tourism and tourist spending has extended the interest in carrying out research on consumer behavior. Understanding the patterns and activities of tourist spending when visiting a particular destination is a key issue in strategic facility planning. Knowing the factors influencing tourist behavior can lead to the better planning of marketing and sales management and improved industry opportunities (Laesser & Crouch, 2006; Oh, Cheng, Lehto, & O'Leary, 2004; Saayman & Saayman, 2009; Saayman & Saayman, 2012).

* Corresponding author.
E-mail addresses: j.salgado@uvigo.es (J. Salgado-Barandela), balonso@hse.ru (Á. Barajas), patricio@uvigo.es (P. Sánchez-Fernández).

In light of the above, this paper aims to identify the factors influencing the expenditure of those attending the matches of a top-level professional league basketball team. The team Rio Natura Monbus Obradoiro (commonly known as Obradoiro), which plays in the top Spanish league (*Liga Endesa*), was taken as the case example for this study. The *Liga Endesa* is Spain's professional basketball league. It is a relevant sporting event that has gained both national and international importance. It consists of 17 teams that regularly compete. The top eight finishers at the end of the regular season face a second round of play-offs, after which the League champion is proclaimed. The paper additionally analyses the existence of differences in the spending behavior pattern of attendees according to how much they spend.

The contribution of this work lies in the way it analyses the determinants of spending for a type of sporting event that, as yet, has not been discussed in the literature (for a professional team over a whole season). This kind of empirical study is becoming increasingly relevant, given that leagues differ from occasional events (which have been more widely studied). Events that take place every season are capable of attracting attendees to the territory regularly. Besides, attendees often repeat their visit throughout the season. It is thus increasingly important to collect reliable information about attendee spending behavior. Event organizers will be better equipped to attract attendees end develop their loyalty, while policy makers could use the results to help maximize the spending impact on the local economy. Another contribution of this work rests on the use of sports factors in addition to factors most commonly employed in previous models: sociodemographic, economic and tourist variables.

The paper is organized as follows. The next section presents the literature review relating to expenditure behaviors in tourism and sport events. This is followed by a description of the sample and variables used in the empirical analysis, before an explanation of the methodology. The fifth section presents the results, with the final sections containing the discussion and conclusions.

2. Literature review

The studies on tourist spending behavior by Brida and Scuderi (2013), Lehto, O'Leary, and Morrison (2002) and Wang, Rompf, Severt, and Peerapatdit (2006) affirm that economic and sociodemographic variables, as well as characteristics related to travel, are the most frequently used in studies on spending determinants. As these works explain, they use economic variables such as income, assets or the existence of economic difficulties. In terms of the sociodemographic variables, current models have used age, education, sex, marital status, residence, occupation or profession and race. For their part, travel characteristics are usually represented by accommodation, length of stay, activities undertaken during the trip, destinations visited, source of travel information, transportation, purpose for traveling, previous experience at the destination or group size (Brida & Scuderi, 2013; Wang & Davidson, 2010).

Specifically, studies of the determinants of spending at sporting events have constructed models for analysis from a combination of socioeconomic variables and the demographic characteristics. Every sporting event is observed to have different characteristics influencing the choice of variables used to build the model. Bilgic, Florkowski, Yoder, and Schreiner (2008), Taks, Green, Chalip, Kesenne, and Martyn (2013) and Downward et al. (2009) have analyzed participant spending. Meanwhile, Yusof et al. (2012), Brida et al. (2011) and Cannon and Ford (2002) have focused on spectator spending.

In relation to economic factors, Brida and Scuderi (2013) and Wang and Davidson (2010) explain, individual income is one of the most important and commonly used determinants in these types of studies. Yet, respondents are more reluctant to share this type of data. Thus, in cases where it is not possible to obtain personal income for the dataset, other variables are used to represent the level of income. Abbruzzo, Brida, and Scuderi (2014), Aguiló Perez and Juaneda (2000), Medina-Muñoz and Medina-Muñoz (2012) and Svensson, Moreno, and Martín (2011) employ variables such as occupation and/or profession to represent the level of income.

Taking into consideration other kind of factors, Abbruzzo et al. (2014) explain that, it is interesting to consider the variable of other activities, that is, if attendee performs other activities besides attending the event, such as, tourism, shopping or leisure activities. The objective of this variable is to identify whether there are activities that are contributing to increase attendee spending in the geographic area where the study is taking place. Another case is represented by variables that characterize the event. Authors such as Bilgic et al. (2008), Dixon et al. (2012), Shani, Wang, Hutchinson, and Lai (2010) and Sato, Jordan, Kaplanidou, and Funk (2014) include this kind of variables. However, most papers do not do this.

Economic and sociodemographic attributes are insufficient to understand decisions concerning tourist destination. Therefore, the use of psychographic variables is proposed to justify decisions regarding tourism destination development (Lehto et al., 2002; Wang et al., 2006). Psychographic variables include all of the characteristics that may influence consumer response to products and services (Lehto et al., 2002) such as interests, opinions, attitudes and lifestyles (Brida & Scuderi, 2013). Thrane (2002), Chen and Chang (2012), Henthorne (2000), Aguiló Perez and Juaneda (2000) and Abbruzzo et al. (2014) include psychographic variables when studying the determinants of expenditure. Psychographic variables have proven to be powerful predictors of travellers' decisions in tourist destinations (Lehto, Morrison, & O'Leary, 2001; Lehto et al., 2002) and, by association, they can also contribute to a better understanding of spending patterns (Wang et al., 2006).

Metric and categorical response models are used to study the determinants of cost models. In the former, the most common method is the classical linear regression model by ordinary least squares (OLS). The most usual alternative estimation procedures to the OLS are Tobit regression model, Double-Hurdle Model and the Negative Binomial Model (Brida & Scuderi, 2013). Other alternative to OLS model is the quantile regression approach which makes possible to assess local behavior in specific portions of the empirical distribution according to the different quantiles rather than the mean values. The universal Logit, Probit and Logit ordinal models are among the categorical response models (Brida & Scuderi, 2013).

In the case of sports tourism, there are studies that identify the determinants of event attendance using quantile regression. This is the case of papers by Jane, Kuo, Wu, and Chen (2010), that it investigates the determinants of game-day attendance in the Chinese Professional Baseball League (CPBL) from 2001 to 2007. Other example is the paper by Serrano, García-Bernal, Fernández-Olmos, and Espitia-Escuer (2015). It focuses on the relationship between the expected quality of the event and attendance at the European football stadiums. Both works found that the outcome uncertainty and the quality of the contestant teams have positive effect on attendance demand. However, no studies have been conducted using quantile regression to analyze the spending patterns of those attending a sporting event. This study addresses this issue by providing evidence concerning the influence of a variety of proposed factors on different spending levels.

3. Data and variables

The data is derived from a survey of attendees at Obradoiro matches. A total of 2797 surveys were conducted at 11 of the team's