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TTRA 2017 Extended Abstract

The Role of Environmental Attitudes in Trip Spending for Motor Racing Event Attendees: Initial Findings and Future Directions

Introduction

The importance of sustainability within the hospitality and tourism industry has become increasingly prevalent in recent years. From a marketing standpoint, there is much debate surrounding the various needs within tourism and hospitality sustainability research (Bramwell and Lane 2005). Within events, research has started to theorize the benefits of sustainable marketing and the benefits the event industry can obtain through sustainability initiatives in marketing (Tinnish and Mangal 2012). The current research answers a call for becoming more innovative at determining potential positive benefits of sustainability within the event industry (Bramwell and Lane 2012) by looking at environmental attitudes and importance of sustainable living for racing event attendees.

In the auto racing industry, green initiatives have become more prevalent in the last decade. In 2008, the American Le Mans Series was designated by United States (U.S.) federal government agencies as reaching “green racing criteria” (Advanced BioFuels USA 2009). The National Association for Stock Car Auto Racing (NASCAR) in the U.S. that same year started an initiative called “NASCAR Green”. This initiative was aimed at all stakeholders associated with the organization in an attempt to reduce environmental impact of attendees, facilities, and racing teams (NASCAR 2016).

Although motor racing organizations are involved with sustainability because “it is the right thing to do,” the salience of sustainability to the consumer of racing events is rarely discussed or confirmed in both popular media and academic literature. Sustainability in the U.S. motorsports industry is generally discussed in reference to the sustainability of the motor vehicles themselves as opposed to event operations, consumer behavior, or consumer preferences. Although initiatives such as ISO 20121 and the Global Reporting Initiative (GRI) Event Organisers Sector Supplement (EOSS) provide guidance for how events can be more sustainable operationally, most racing organizations do not have the awareness and/or capability to use these resources. In addition, assessing relationships between attendee attitudes toward sustainability and financial solvency of events has been neglected.

Although metrics have been researched related to environmental impact, no previous research has determined if there is a link between an attendee’s attitude toward sustainability and the economics of their visit to a destination. As such, research discovering insights on racing attendee consumer behavior as it relates to sustainability is a need and is the purpose of this study.

Literature Review

A literature review completed by Myung, McClaren, and Li (2012) examined articles related to environmental issues in hospitality-related journals from 2000-2010. They found 93% of all academic research in this area to be completed in either lodging or restaurants. Little research concerning sustainability of events beyond mega events, such as the Olympic Games, has been conducted.

Within event research, major sporting events such as races create high levels of tourism, prestige, and economic benefit for a local area (Getz 1997). Since not all groups at events spend the same amount of money (Kruger, Saayman, and Ellis 2010), much focus in event economic research has examined differences in spending across a variety of demographics such as repeat and first time visitors, income, age, and length of stay (Byrd, Beedle, and Cardenas 2014). However, little research has examined potential differences in attendee characteristics when considering sustainability concepts.

Within sustainability in hospitality and tourism research, sustainability values have been used to predict traveler choices (Sirakaya-Turk, Baloglu, and Mercado 2014). More specifically, event sustainability research has focused on the ability of events to change behavior and attitudes (Mair and Laing 2013) and the “green” elements of an event, such as design and waste, which are the most important drivers to perceived value of an event (Wong, Wan, and Qi 2015). However, these research studies are completed at events which have a sustainability focus or are already quite sustainable in practice and/or reputation.

From a management perspective, research concerning sustainability in tourism has found that managers are being confronted with environmental issues that bring in both ethical and social responsibility considerations as well as long-term economic considerations (Molina-Azorin, Claver-Cortes, Lopez-Gamero, and Tari 2009). Hotel managers consider the distinction of being green as a benefit that elevates a property’s image, reputation, and attraction to guests (Chan 2013). Within the convention industry, research has examined the emotional formulation of decisions and its consideration in the development of policies and decisions by stakeholders and managers (Park and Boo 2010).

In the literature review by Myung et al. (2012), a major criticism of sustainability research was a lack of theoretical constructs used in research studies. Far too often research was conducted without appropriate theoretical foundation. One of the theoretical constructs that has been used in academic literature is the theoretical construct used in this study: The Revised New Ecological Paradigm (NEP).

More recently, the NEP has been used to study many different areas in tourism and hospitality such as resort choice (Tanford and Montgomery 2015), protected area tourism (Imran, Alam, and Beaumont 2014), and surf tourism (Frank, Pintassilgo, and Pinto 2015). The NEP has also been used recently as the theoretical framework in examining consumer behavior of music festivalgoers in Australia and the United Kingdom (Mair 2014) and in examining perception and satisfaction of non-urban festival attendees in Australia (Gration, Raciti, and Walters 2015).

This research aims to add to the body of academic literature by providing innovation regarding potential benefits of sustainability in the event industry (Bramwell and Lane 2012) and examining sustainability and economic performance in a unique tourism context (Myung et al. 2012). This is completed using the NEP as the theoretical underpinning of research conducted at an event type (motor racing) that is traditionally considered to be non-sustainable.

Methodology

Monterey County, California, USA is a well-known destination. Main attractions include 17-mile drive in Pebble Beach, the town of Carmel-by-the-Sea, and the Bixby Bridge in Big Sur. As a

result, tourism is a large driver of the local economy and had a total direct economic impact of USD\$2.7 billion in 2015, supporting 24,390 jobs (Dean Runyon Associates 2016).

The current study was conducted at four of the major events in 2015 at Mazda Raceway Laguna Seca in Monterey. The events included in the study were the FIM Superbike World Championship (July 17-19), Rolex Monterey Motorsports Reunion (August 13-16), Pirelli World Challenge (September 11-13), and Porsche Rennsport Reunion V (September 25-27).

The study was conducted during all days and all racing hours for the four events chosen. Across these four events, the total attendance was 188,749. 86.6% of these attendees were U.S. residents from outside of Monterey County, and 4% were international visitors. Attending the race at Mazda Raceway Laguna Seca was the primary reason for visiting the area for 90.4% of visitors.

In total, 1,054 attendees were approached by the research team over all 13 event days for the four race events. Surveys were administered randomly at various locations throughout the event facility. No incentive was given to complete the survey. 805 attendees agreed to complete the survey. A total of 795 completed usable surveys resulted after discarding ten incomplete surveys. The response rate was 75.4%.

The purpose of this research was to examine differences in sustainability living attitude and environmental worldview based on attendee characteristics. For the importance of sustainable living, one likert-scale question ranging from 1 (No importance to me) to 5 (Great importance to me) was used similar to Mair and Laing (2013). Respondents across all four events indicated a high importance of sustainable living, with a mean of 4.04 across all four events. No individual race event had a mean score below 3.86.

For environmental attitudes, the revised New Ecological Paradigm scale from Dunlap, Liere, Mertig, and Jones (2000) was used. This fifteen item scale has been widely used to assess environmental worldviews in different settings such as parks (Haukeland, Veisten, Grue, and Vistad 2013) and higher education (Jowett, Harraway, Lovelock, Skeaff, Slooten, Strack, and Shephard 2014). According to Anderson (2012, pp. 261-2), “no other instrument has been so extensively accepted as a measure of environmental worldviews.” The validity of the NEP to represent environmental attitudes has been tested repeatedly (Dunlap 2008) and should be used as a standardized measure for researchers (Hawcroft and Milfont 2010).

Results

The overall NEP mean was 52.99 with a median of 53 (n = 795). A higher score represents a more pro-environmental attitude and belief system. The range of possible scores on the NEP is 15-75. The data was normally distributed (skewness = -0.251, kurtosis = -0.256). Respondents were split into tertials similar to Jowett et al. (2014). Group 1 had a score under 49, Group 2 had a score ranging from 49-58, and Group 3 had a score above 58. These are fairly similar results to the college student population in Jowett et al. (2014) which had tertials of <51, 51-58, and >58.

Within demographic variables, using a series of t-test and ANOVA analyses, no difference (p>.05) was found in environmental worldview for age (<30, 30-39, 40-49, 50-59, 60+), income level (<\$50k, \$50-75k, \$75-100k, \$100-150k, >\$150k), number of days attending the race weekend, first time or repeat attendee, family or non-family group, nor accommodation type (Tables 1 & 2). The only demographic variable significant was whether attendee tourists were on

a day trip to the event or were staying overnight (Table 2). The mean NEP score for those on a day trip to the event was 54.48 compared to 52.58 for those staying overnight.

Table 1. ANOVA Tests for Demographic Variables (DV = NEP Score)

Independent Variable	n	F-value	p-value
Race Days Attended (1, 2, 3 days)	795	2.086	0.125
Income Level (<\$50k, \$50-74k, \$75k-99k, \$100-149k, \$150k+)	760	0.725	0.575
Age (<35, 35-44, 45-54, 55-64, 65+)	790	0.707	0.587

Table 2. *t*-tests for Demographic Variables (DV = NEP Score)

Independent Variable	n	<i>t</i>	p-value
Length of Stay (Day trip, Overnight)	734	2.059	0.040
Group Type (Family, Non-Family)	795	-1.101	0.271
Accommodation Type (Hotel, Other)	737	-0.712	0.477
Previous Attendee to Racetrack (Yes, No)	792	0.520	0.603

Per-person trip spending was found to be non-normal (skewness = 4.481; kurtosis = 31.899). In order to normalize the data, a log transformation was conducted (skewness = -0.777; kurtosis = 0.929). The end result of the regression testing the relationship between NEP score and the log transformation of per person trip spending was a significant with $p=.020$ and a regression equation of:

$$\log(\text{per person trip spending}) = 2.852 - .0054 * (\text{NEP score})$$

The negative coefficient indicates that a higher NEP score predicts a lower amount of per person trip spending. For those with an NEP score of 40, per-person trip spending would be predicted at \$432.51. For an attendee with an NEP score of 65, per-person trip spending would be predicted at \$316.96 (Figure 1). This indicates that people with less sustainable environmental worldviews are more likely to spend more money on a trip to a racing event.

Conclusion and Discussion

This research shows evidence of the need to consider sustainability attitudes within tourism research broadly and event research more specifically. For practitioners, the research provides insight into similarities and differences in event attendees for racing events when considering attendee's personal views on sustainability. This research can provide event professionals with insight on who at an event values sustainability most. It is envisioned that research results can assist in more efficient and effective marketing and operation strategies.

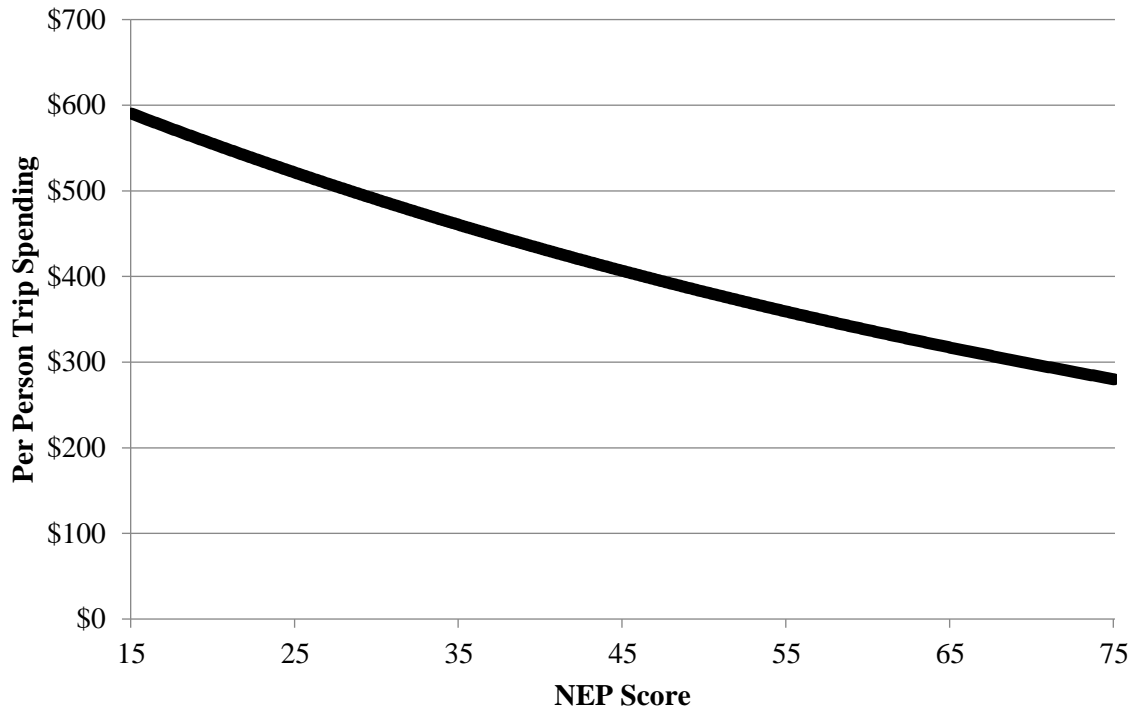


Figure 1. Relationship between NEP Score and Per-Person Trip Spending

The limitations of this research include that only one facility in one location was studied. Although four different events with different motor races were studied, geographical differences likely exist. Future research should examine this phenomenon in other locations. Another limitation of this study is the lack of other event-related studies' use of the NEP scale. Comparative analysis of NEP scores was limited to non-event-related research. Statistical difference testing could not be completed.

However, there is a high importance in the findings of statistical non-significance in this study that dispels many common conceptions regarding sustainability within demographics. Age, income level, previous race attendance, and accommodation type were all found to be non-significant in environmental worldview. It is of particular note that the event type for this research was one traditionally considered non-sustainable (motor racing). More research examining sustainability attitudes in other contexts would provide additional insight.

Finally, the finding of an inverse relationship between per-person trip spending and environmental worldview provides an interesting discussion point for both academics and practitioners. This could suggest that destinations may obtain a higher per-person economic impact from tourists by attracting those who do not value sustainability. Future research should examine whether this relationship exists in other tourism-related contexts in other destinations.

Additionally, it is important to note that this inverse finding does not contradict previous tourism research that has shown that people are willing to pay more for "sustainable" tourism services in areas such as lodging (i.e. Kim and Han 2010) and flying carbon neutral (Choi and Ritchie 2014), or research that has shown that environmental values can predict traveler choices (i.e. Sirakaya-Turk et al. 2014). This research does, however, suggest that academics and practitioners have not fully considered the impact of consumer choices related to sustainability on *total* trip spending

across the tourism system (i.e. hotels, restaurants, attractions, etc.). Do tourists who are attracted by sustainable destinations and products, even if more expensive, ultimately consume and spend less while traveling? Are tourists who do not value sustainability more likely to spend more during their trip due to overconsumption habits? A more holistic view of the impact of sustainability attitudes on trip spending for *all* parts of the tourism system is a direction for future understanding and development of tourism destinations.

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