

# Quality of a Green Destination as Perceived by Convention Attendees: The Relationship between Greening and Competitiveness

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## ABSTRACT

*While the MICE industry has been buzzing with how green events are and will be, a common definition of green does not exist. This study will contribute to the body of knowledge of how convention attendees perceive the environmental quality and green practices in a MICE destination. This study found statistical difference in the perception of greening between Orlando and two other destinations. Positive relationships were found between greening and the competitiveness. Within the framework of destination competitiveness, the measurement of greening perceived by the attendees may pave the way to further analysis of the effectiveness of green policies and practices. This study may have important implications for convention planners who are interested in greening. Moreover, destination management organizations may consider the result a benchmark for their efforts in developing green destination can appeal to the meeting planners, and enhancing the favorable image as a competitive advantage.*

**Key Words:** *green events, green practice, destination competitiveness, convention attendees, MICE industry.*

## INTRODUCTION

### Background of the study

The meeting, incentive, convention, and exhibition (MICE) industry has been buzzing with how green events are and will be. A common definition of green, however, does not exist. According to Shrum, McCarty, and Lowrey (1995), the word “green” is used to mean “environmentally friendly”. It can also mean “sustainable” in terms of the tourism destination (Mihalic, 2000; Lee, 2001) and “clean and efficient” regarding pollution and energy usage (Tsaur & Wang, 2007).

To address the lack of a universally accepted understanding of the green movement, the Convention Industry Council (CIC) initiated the Green Meetings Task Force in 2003 for creating minimum best practices for events planners and suppliers. The report suggested two major benefits of green meetings and events. Green meetings and events can save planners' and suppliers' money and are good for the environment (Convention Industry Council, 2004, p.3). Destinations that host MICE events want to be called "Green Destinations" and some destination marketing organizations (DMOs) recommend that their members (mainly hotels) obtain Green Seal certification ("Green Destination Briefs", 2008). Clearly, there is a desire by destinations to be recognized for the green efforts.

### **The Importance of this study**

Turtle (2008) attempted to prove the business benefits of green meetings while mentioning that there were three major myths regarding the implementation of green meetings: green meetings are complicated; green meetings are costly; and green meetings reduce the quality of the meeting experience (p.30). Fortune magazine debunked 25 green myths in their April special edition of 2010. This article posited that it is not easy to clarify what is environmentally sound and what is not ("The Truth about Green", 2010).

Despite all of the conversations about greening, not many empirical studies have been done to measure the effectiveness of green practices. Trade journals, industry magazines, and academic journals have published articles about greening but most of them have discussed specific cases of green practices and explained how green practices can be achieved. The articles have provided tips for green strategies or checklists for green site selection. Very few have attempted an empirical approach (Holleran, 2008).

Therefore, more research may be required to verify the best practices for greening and validate the results of those practices based on a rigorous methodology. This study will contribute to the body of knowledge of how convention attendees perceive the environmental quality and green practices in a MICE destination. Within the framework of destination competitiveness, the measurement of greening perceived by the attendees may pave the way to further analysis of the effectiveness of green policies and practices.

## **THEORETICAL BACKGROUND**

### **Green meetings and green destinations**

Meetings, incentives, conventions, and exhibitions are one of the most wasteful tourist activities and often have a negative impact on the environment (Gračan, Sander, & Rudančić-Lugarić, 2010). People who participate in MICE events consume a lot of resources and generate a lot of waste. For example, according to the San Diego Convention Center, a typical five-day conference for 8,500 attendees, aside from emissions from attendees' traveling to and from the conference, use 210,800 plastic plates, 297,500 paper napkins, 255,000 plastic cups and 306,000 bottles, 24 tons of waste, and 88,461 kWh electric energy (as cited in Gračan et al, p.338).

The concept of "green meetings" is relatively new and there is no industry-wide accepted meaning for the term. The concept may include all aspects of an event such as the meeting site,

provision of catering and transportation services, and procurement of meeting materials. As mentioned earlier, these aspects may affect the environment of hosting destinations in negative way (Holleran, 2008).

Moreover, the notion of green meetings embraces three elements of sustainability: responsibility towards the environment; social responsibility; and economic responsibility. Some green meeting procedures can overcome negative impacts on the environment such as air pollution, emissions, opportunity costs, accumulated waste, and so on. Such implementation of green practices as money saving (economical responsibility), protection of natural sources and wealth (social responsibility), reduction of greenhouse gases emission, reduction of water usage and reuse of recycled products like paper (responsibility towards the environment), can reduce environmental pollution, increase profit and improve the destination's reputation (Davidson & Rogers, 2006).

In tourism literature, a green destination has been interpreted as a sustainable destination or an eco-tourism destination (Holleran, 2008). However, in the realm of convention business, a green destination may be defined as an event-hosting city that practices recycling, energy efficiency, and water conservation. For example, Portland, Oregon can be counted as a green destination because its convention center was awarded the U.S. Green Building Council's 'Leadership in Environmental and Energy Design (LEED) Existing Building' rating. Accordingly, although 'green' is used interchangeably with 'sustainable' or 'eco-friendly', the concept "green" is becoming a broader one including all aspects of event-associated operations in MICE industry.

### **Destination competitiveness and greening in convention industry**

In the past, some people believed that greening (or green practices) could depreciate the quality of the experience in a destination. Turtle (2008) wrote that this idea was still debatable and controversial. However, the majority of recent literature shows that green practices would be beneficial rather than negative. In other words, the positive impacts of greening strategies on destination quality can offset the negative aspects (inconvenient and costly to implement) (Pizam, 2009).

Therefore, greening efforts in a MICE destination may be a part of destination competitiveness in convention industry. The impacts of greening program on destination competitiveness may be considerable because greening has been spreading out to every aspect of convention operations (Murphy, 2009). Based on a convention destination competitiveness model (Lee, Choi, & Breiter 2010), green practices are only related to the 'agreeable environment' directly but other attributes may have a link to greening concept. For example, greening initiative can bring favorable 'image' of the destination and possibly provide better rates (i.e., affordability) by saving money from the reduction of energy and waste (See Table 1).

**Table 1**  
**Seven A's for Convention Destination Competitiveness**

Attributes	Major items
Accessibility	airlines, on-site (local) transportation
Availability of facilities	hotel rooms, meeting space, restaurants, convention facilities
Affordability	hotel rates, venue rental fee, food cost
Appropriate service	service quality of hotels, convention venue, restaurant
Agreeable environment	climate, political stability, infrastructure, safety & security
Attractions	shopping, nightlife, entertainment, culture, historical site
Appealing image	existing image, promotional appeal

(Source: Lee et al., 2010)

## METHODOLOGY

### Research objectives

This study attempted to identify and measure attendees' perceptions of the quality of the destination environment and green practices in the convention. Based on the perceptions of the greening components, it compared the differences of the perceptions among the sampled destinations. Furthermore, it endeavored to validate the relationship empirically between greening and convention destination competitiveness.

### Research questions

To achieve the stated objectives, these questions were examined during the data analysis phase. Firstly, how do attendees perceive the greening program implemented by the destination and the convention management? Secondly, regarding the perceptions, is there any statistically significant difference among the destinations? If so, which items are different? Thirdly, is there any statistically significant relationship between destination environmental quality and convention destination competitiveness? If so, is it positive or negative relationship? Is there any statistically significant relationship between green practices at convention site and convention destination competitiveness? If so, is it positive or negative relationship?

### Research design

*Population and sample.* The population is attendees who participated in at least one convention over the past few years. The sample is the attendees of the three tradeshows produced by Premiere Show Group (Orlando, FL; Birmingham, AL; and Columbus, OH) that were willing to respond to a Web-based survey. The homogeneity of the sample was considered for the comparison of the destination and purposive sampling was used for the limited ways to approach the respondents.

*Survey instrument.* The self-administered questionnaire was posted on an online survey website. This survey was divided into three parts. The first part asked respondents to rate the

importance of convention destination attributes and the destinations' performances of each attribute on a 5 point Likert-type scale. The second part of the survey included questions about the quality of the destination environment and greening efforts at the event itself. Two sections were included in the part. In the first part, respondents were asked to rate the environmental quality of the destination. In the next section, the respondents were asked to rate the extent of their recognition on the greening practices in the convention site. The measurement items of the two sections are shown in Table 2. The last part of the questionnaire was used to obtain kinds of demographic information of respondents. The tradeshow organizer sent an invitation email to the attendees to encourage them to participate. A follow-up email was sent as a reminder two weeks later.

**Table 2**  
**Measurement Items of the Green Destination and Green Practices at a Site**

Component	Measurement Items	Anchors	Source
Environmental quality of the destination	<ul style="list-style-type: none"> <li>• Air quality</li> <li>• Noise levels</li> <li>• Cleanliness of public places</li> <li>• Landscaping</li> <li>• Building design and maintenance</li> <li>• Signs</li> <li>• Open space, parks and conservation areas</li> </ul>	Poor (1) - Excellent (5)	Davidson & Rogers (2006); Gračan et al (2010); Holleran (2008)
Recognition on the greening practices in the convention site	<ul style="list-style-type: none"> <li>• Disposables were used at food functions (e.g., plastic bottles)</li> <li>• Separate recycling bins with proper signage were in visible locations</li> <li>• Recyclable materials for signs, badges, shoulder bags, etc. were used</li> <li>• Limited on-site printed materials and giveaways</li> <li>• Water pitchers or water coolers were used at meetings</li> <li>• Environmentally friendly activities were offered as part of the convention (e.g., cleaning up a park that you visited)</li> <li>• Alternative-fuel transportation systems were used for the convention (e.g., hybrid shuttle buses)</li> </ul>	Never (1) - Always (5)	Gračan et al (2010); Murphy (2009); Turtle (2008)

### Data Collection and Analysis

Data were collected from September to December in 2009 with two contacts per destination. From 18,278 targeted attendees, a total of 696 responses were identified as usable, yielding an overall response rate of 3.81%. The response rates on each destination are as follows: 1) Orlando, FL 5.26% (448/8,523), 2) Columbus, OH 2.12% (133/6,269), and 3) Birmingham, AL 3.30% (115/3,486) respectively.

The data were converted into Excel spreadsheet for importance-performance analysis (IPA) and transferred to Statistical Packages for Social Sciences® (version 17.0) for statistical analysis. This study utilized the IPA to calculate a composite index for the destinations to measure the relative competitiveness. This study adopted the same formula as Lee et al. (2010) used, which was introduced by Opperman (1996) and modified by Go and Govers (1999). Convention destination competitiveness index (CDCI) was computed using the following formula:

$$CDCI_d = \frac{\sum_{a=1}^N (I_a) (P_{ad})}{\sum_{a=1}^N (I_a)}$$

Where:  $CDCI_d$  = convention destination competitiveness index of destination d

$I_a$  = importance of attribute a (a = 1... N)

$P_{ad}$  = performance of destination d with respect to attribute a.

This composite index was produced on an individual attendee basis and each index was utilized to see the correlation with the aggregated value of greening components such as the environmental quality of the destination and the degree of green practices recognition at the convention venue.

Pearson correlation was used to see the relationship between CDCI and greening components while analysis of variance (ANOVA) was conducted to compare the attendees' perception of the three destinations in terms of the two greening components (i.e., environmental quality and green practices).

## RESULTS

### Preliminary procedures

To aggregate the data from the questions about the quality of the destination environment (seven questions) and about the green practices at a convention site (seven questions), the reliability tests were conducted and Cronbach's  $\alpha$  were calculated. Both groups of questions showed acceptable internal validity ( $\alpha$  for quality of destination environment = .900;  $\alpha$  for green practices = .838) and the scores for each part were added up to total scores as total green destination (TGD) and total green practices at a site (TGS). After the aggregation, these new variables were checked for 'out-of-range' cases and nothing was found in the test (Pallant, 2001). Consequently, these two variables (TGD and TGS) were used for the parametric tests (e.g., Pearson correlation and analysis of variance) to see the statistical relationship and differences.

Furthermore, convention destination competitiveness index (CDCI) was calculated individually (i.e., each respondent has her/ his own score for the index) in a given formula. The individual CDCIs were used to see the statistical relationship with the variables regarding greening.

### Differences among destinations

Overall, Orlando, FL had relatively favorable evaluation than other two destinations (i.e., Birmingham, AL and Columbus, OH) while the two destinations looked almost the same regarding the attendees' perception on greening components in the destinations. Out of seven

measurement items for the quality of destination environment, Orlando showed significant differences from the two other destinations in ‘Noise levels’, ‘Landscaping’, ‘Building design and maintenance’, and ‘Signs’ while the other three items were not different among the destinations.

In the green practices at a convention site perceived by attendees, four items were different between Orlando and the two other destinations while Columbus and Birmingham showed the difference in one item (i.e., more attendees noticed such green practice as ‘Water pitchers or water coolers’ at the convention site in Birmingham than those in Columbus). In detail, Orlando showed the difference from Birmingham regarding ‘Separate recycling bins with proper signage’ and ‘Alternative-fuel transportation systems’ whereas Orlando had the better perception from the respondents than Columbus regarding ‘Water pitchers or water coolers’, ‘Environmentally friendly activities’, and ‘Alternative-fuel transportation systems’.

In the aggregated data, however, Orlando’s rating was significantly higher than those of the other two destinations in total green practices at a site (TGS). On the contrary, there is no statistical difference among the three destinations in terms of total quality of destination environment (TGD).

### Relationship between greening and competitiveness

Positive relationships were found between the two aggregated variables in greening and the competitiveness index. The results are shown in Table 3 and Table 4.

**Table 3**  
**Pearson Correlation between quality of destination environment and CDCI**

		individual index	Total green destination
individual index	Pearson Correlation	1	.558**
	Sig. (2-tailed)		.000
	N	692	655
Total green destination	Pearson Correlation	.558**	1
	Sig. (2-tailed)	.000	
	N	655	656

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Table 3**  
**Pearson Correlation between green practices at a convention site and CDCI**

		individual index	Total green site
individual index	Pearson Correlation	1	.250**
	Sig. (2-tailed)		.000
	N	692	592
Total green site	Pearson Correlation	.250**	1
	Sig. (2-tailed)	.000	
	N	592	592

\*\* . Correlation is significant at the 0.01 level (2-tailed).

## **Further analysis**

With the demographic factors, whether each the environmental quality of the destination and green practices has a significant statistical difference in the categorical groups were examined. In the analysis, two significant differences were found as follows: In the ANOVA of the total green destination (TGD), convention frequency (How many conventions do you attend per year?) showed the difference between the only once a year group, and 6 to 11 times and more than 12 times (once a month) groups. In addition, gender showed the difference in the t-test of the Total green destination (TGD), which male group is slightly thinking highly of the quality of the destination environment. Other than that, the other factors such as work experience or annual convention attendance frequency do not affect attendees' green perceptions of the destination and practices as the convention site.

## **CONCLUSION**

### **Discussion**

This study found statistical difference in the perception of greening between Orlando and two other destinations. It can be inferred that Orlando is doing better job but this finding should be analyzed more carefully because there are many factors to influence the perceptions (e.g., attendees' personal interest in greening, attendees' experience in MICE industry, etc.). Moreover, the infrastructure for conventions (or events) in Orlando is probably different from those of the other two cities. This difference might make the different level of greening programs and affect the perception of attendees.

Nevertheless, the correlations between competitiveness index and perceptions of greening may indicate the possibility that greening would be a core competence of a convention destination, which can be a competitive advantage in the future. Accordingly, green practices seem to become a prerequisite for successful MICE events, not an optional consideration nor an ethical issue.

### **Implications of the study**

This study may have important implications for convention planners who are interested in greening. Moreover, destination management organizations may consider this result a benchmark for their efforts in developing green destination can appeal to the meeting planners, and enhancing the favorable image as a competitive advantage (Braley, 2010).

### **Limitations of the study**

This study is not also immune in terms of the limitation. First, the limited sampled destinations cannot be generalizable. Secondly, the self-administered survey may cause a self-selection bias. Finally, the list for green practices may not be collectively exhaustive. It can deteriorate the validity of the construct "green practice". These limitations may cause problems to interpret the result as the general knowledge of green strategies in the destinations and the convention site where the attendees asked to rate.

## Recommendations for future study

For external validity, a bigger and more representative sample will be needed. Not only samples from more destinations but also diverse types of conventions will enhance the explainability and applicability of the results.

Triangulation may be necessary for the purpose of valid conclusion. Considering the trinity of the structure in convention, it would be meaningful to study the perception of planners (or organizers) and exhibitors. Without their voices, the results may be subject to the pitfall of disproportionate viewpoints.

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