The Perceived Impacts of Sport Tourism: An Urban Host Community Perspective

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Sport tourism is one of the fastest growing market segments in the tourism industry and is receiving increased attention for its social, environmental, and economic impacts upon destinations. Prior research in tourism impacts has tended to focus exclusively on tourism as a whole and does not differentiate among the different types of tourism that may be present in a destination. The purpose of this study was to examine how residents of Indianapolis, Indiana perceived the impacts sport tourism has upon their city. A total of 347 surveys were returned in a mailed questionnaire. Exploratory factor analysis revealed a four factor structure of social benefits, environmental benefits, economic benefits, and general negative impacts. Social and economic benefits were strong predictors for support for further sport tourism development revealing a strong identification with the advantages of sport tourism in their city such as an increased cultural identity and social interaction opportunities.

The tourism industry as a whole, in many regards, is a hospitality and service industry. When tourists visit any type of attraction (sport or nonsport) they expect gracious and prompt service. This is the fundamental host and guest relationship (Smith, 1992). Murphy (1985) further described tourism as a sociocultural event for both the host and the guest and states that “if tourism is to merit its pseudonym of being ‘the hospitality industry’, it must look beyond its own doors and employees to consider the social and cultural impacts it is having on the host community at large” (p. 133). It is important, therefore, that tourism studies explore the social impacts of tourism on host communities (Gibson, 2006).

Brunt and Courtney (1999), in their study of a small British coastal tourist resort, discovered that the sociocultural impacts of tourist-host interaction could be applied to host residents and was influenced by their particular role or relationship to the tourism industry. Not everyone in a host community perceives the impacts of tourism in the same way. Krippendorf (1987) further suggested that the opinions,
beliefs, and expectations regarding tourism can be quite different depending on the general population or occupational group being studied. Vogt and Jun (2004) discovered that general residents were not as informed about the different types of tourism segments who visited their destination and therefore were not able to offer their opinion on the types of impacts they may have. Andriotis and Vaughan (2003) further agreed that average resident perceptions' of the different types of tourists may be vague and they may not be aware of any type of tourism other than the mass market. Thus, individuals who reside in a particular community and also work and/or have business interests in the tourism industry can offer valuable opinions and professional knowledge of the different types of tourists who visit their destination.

The problem of this study, therefore, was to examine an urban population of tourism business representatives' perceptions of social, environmental, and economic impacts of the sport tourism market segment and subsequent support of sport tourism in the Indianapolis, Indiana area. Specifically, the study addressed the following research questions:

1. Were the perceived social, environmental, and economic impacts of sport tourism a predictor for further sport tourism development?

2. Were there any differences in perceived social, environmental, and economic impacts of sport tourism associated with the Indiana Convention and Visitors Association (ICVA) member’s age, gender, length of residence, and level of education?

In recent decades, an abundance of empirical investigations (Ap & Compton, 1993; Fredline, 2006; Fredline & Faulkner, 2000; Gursoy, Jurowski, & Uysal, 2002; Hernandez, Cohen, & Garcia, 1996; Lankford, 1994; Ross, 1992; Schroeder, 1996) have focused on resident and tourist attitudes and perceptions of the impact of tourism and have proposed strategies to provide better service delivery. However, empirical research on the social impact of sport tourism on local host communities is limited (Barker, 2004; Fredline, 2006; Ritchie & Adair, 2004). In addition, few studies have investigated specific tourism market segments and their perceived impacts on a destination (Liu, Sheldon, & Var, 1987; Vogt & Jun, 2004). The growing importance placed on studying impacts from a destination perspective also increases the likelihood for resident support for tourism development and enables policymakers to enhance the quality of life for the community (Chen, 2001).

As Indianapolis, Indiana continues to develop sport tourism attractions and resources, it is essential to gain an understanding of the business owners’ and residents’ opinions regarding development. Not including residents’ opinions or disregarding them can have economic and social consequences according to Pearce (1998). These include delayed construction of tourism development due to community protests, loss of support for tourism development officials, an unwillingness to work in the industry and lack of enthusiasm for promotion of tourism by word of mouth (Pearce, 1998). Therefore, resident attitudes toward sport tourism development in Indianapolis are paramount. This follows the paradigm that without community support, it “is difficult to develop a sustainable tourism industry in the community” (Andereck & Vogt, 2000, p. 27). The United Nations World Tourism Organization (UNWTO) posited that to have a sustainable tourism destination, the social, environmental, and economic impacts must be monitored and brought to an acceptable level for residents, visitors, and business interests (UNWTO, 2004).
The hospitality of the local community is vital to the tourism industry but the destination should be developed according to host community needs (Andriotis, 2005). Murphy (1985) agreed and asserted that tourism is a resource industry, dependent not only on the natural and cultural resources but also on public goodwill. This goodwill is an essential piece of a visitor’s experience “for if the host community is antagonistic to visitors, no amount of attractions will compensate for the rudeness or hostility” (Murphy, 1985, p. 13). As a result, there has been a proliferation of tourism impact studies from the destination’s perspective in the last three decades drawing connections between resident attitudes of perceived tourism impacts and tourism development (Andereck & Vogt, 2000). For example, Pearce, Moscardo, and Ross (1996) discussed over 30 studies conducted on the social impacts of tourism on local communities. These studies have also frequently developed models to explore relationships between residents’ demographics, perceived impacts, and support for tourism development (Chen, 2001; Gursoy et al., 2002; Ko & Stewart, 2002; McGehee, Andereck, & Vogt, 2002; Perdue, Long, & Allen, 1990).

Social Exchange Theory

The social exchange theory is a social psychological and sociological perspective that describes social change as a process of negotiated exchanges between individuals or groups. This theory, dating back to the early 1920s (Malinowski, 1922), is “one of the most influential conceptual paradigms in organizational behavior” (Cropanzano & Mitchell, 2005, p. 874). It suggests that people engage in interaction or reciprocate with other people because they expect to receive benefits or incentives from the other party (Blau, 1964; Gouldner, 1960) or that it generates obligations between the parties (Emerson, 1976). Thus, human relationships are formed by the use of subjective cost-benefit analysis creating mutual obligations, reciprocity, or repayment over time (Cropanzano & Mitchell, 2005; Gouldner, 1960).

In assessing tourism related impacts to a destination, the social exchange theory has been used predominately in past studies (Andereck & Vogt, 2000; Andriotis, 2005; Ap, 1992; Chen, 2000, 2001; Gursoy et al., 2002; Harrill, 2004; Perdue et al., 1990; Vogt & Jun, 2004). It is based on the assumption that tourism development will be supported when the benefits, such as economic benefits, outweigh the costs of sharing environmental and social resources with tourists (Harrill, 2004). In their study of host community reactions to the Gold Coast Indy major motorsport event in Australia, Fredline and Faulkner (2000) found that sport events may have both positive or negative impacts on the host community residents. The authors further suggested that the “bulk of previous research into host community perceptions can be summarized in terms of the ‘intrinsic/extrinsic’ dichotomy” (p. 765). Extrinsic variables include the stage of development, seasonality factors, and cultural differences between the host community and the actual event while intrinsic variables include demographic characteristics, geographical proximity to the activity, and the involvement in tourism by the host community.

The social exchange theory allows for the investigation of both positive and negative attitudes of residents to tourism in a destination (Ap, 1992). The social exchange theory, when used in tourism, postulates that hosts and visitors exchange resources that are valued by both parties. More than likely, residents and the busi-
ness community will be aware of the positive and negative implications of tourism and either will support or not support tourism development based on their perceptions of the benefits and costs (Andriotis & Vaughan, 2003; Sutton, 1967). Host communities may feel exploited and feel they are on the losing end of the tourist/host relationship (Sutton, 1967). This leads to a point of diminishing returns for host communities and negatively perceived impacts (Harrill, 2004). Therefore, it assumes that hosts enter an exchange with the purpose of “gaining” or “winning” in the end (McGehee & Andereck, 2004). This assumption has inherent limitations. It assumes that residents and business owners welcome tourists to their destinations with only the hopes of gaining economically from their tourism dollars. It does not take into account those host communities who may support tourism knowing they will not gain from it at all (McGehee & Andereck, 2004). Moreover, the social exchange theory also assumes that all parties enter into an exchange with enough information to believe they have made the correct decision however, in reality, lack of enough or correct information is common (McGehee & Andereck, 2004). “The increasing demand for accountability requires event organizers and destination marketers to demonstrate that their events add value to the life of the community in which they are held” (Chalip, Green, & Hill, 2003, p. 230).

**Sport Tourism**

Sport tourism is one of the largest and fastest-growing segments of the travel and tourism industry (Standeven & De Knop, 1999) and one that is receiving increased attention for its social, environmental, and economic development and opportunities. It is widely understood that major sporting events contribute significantly to the economic development and tourist traffic in a city or region (Higham, 1999; Turco, Swart, Bob, & Moodley, 2003) and are a vital component of the marketing mix for tourist destinations (Getz, 1998; Gibson, 1998a). According to Ritchie and Adair (2002), “sport and tourism are now among the ‘developed’ world’s most sought-after leisure experience” (p. 1). They are highly valued and regarded due to the fact that “tourism is a trillion dollar industry. . . . sport is a multi-billion dollar industry and has become a dominant force in the lives of millions of people globally” (Kurtzman, 2005, p. 47).

During the past two decades, there have been various studies and papers devoted to identifying and defining sport tourism (Gibson, 1998a, 1998b; Hall, 1992; Hinch & Higham, 2001; Redmond, 1991). However, for the purposes of this paper, sport tourism is defined as “all forms of active and passive involvement in sporting activity, participated in casually or in an organized way for non-commercial or business/commercial reasons that necessitate travel away from home and work locality” (Standeven & Deknop, 1999, p. 12).

Sport tourism, as with the other types of tourism, is viewed as a vehicle for economic development in urban areas (Gibson, 1998a). Past research has examined the perceived economic impacts of specific sport tourism events by members of the community. Walo, Bull, and Breen (1996) reported that residents did perceive an economic gain from sporting events, however, smaller scale events contributed to a social benefit, as residents were more likely to volunteer their time to the operation of these events and these events were perceived to bring the community together.
Soutar and McLeod (1993) examined resident perceptions of the America’s Cup Defense in Fremantle, Australia and found that resident perceptions before the event took place were remarkably different from the actual social or economic impacts experienced. The actual economic impacts for the community were not as high as expected and the social costs of the event, such as traffic and congestion, were not perceived to be as much of a problem before the event (Soutar & McLeod, 1993).

Other research has also examined the social impacts sport tourism may have and also explored the environmental impacts. For example, Pleumarom (1992) and Stoddart (1990) both explored the effects of golf as a tourist attraction and Hudson (1995) examined the effects skiers and hikers had in Verbier, Switzerland. However, the ability to compare destinations and the multitude of types of sporting events is hampered by a standardized method of determining resident perceptions of sport tourism events (Gibson, 1998b).

Although comprehensive in their analysis, most of the above studies group tourism impacts into positive or negative perceptions without distinguishing specific types of impacts. In addition, much of the past research has examined smaller towns and more rural locations (Andereck & Vogt, 2000; Gursoy et al., 2002; McGhee & Andereck, 2004; Perdue et al., 1990; Vogt & Jun, 2004) and has paid little attention to urban tourism destinations. According to Murphy (1992), despite the fact that much tourism takes place in urban areas, little investigation has been conducted in these destinations. Urban tourism destinations are unique in that tourism is not necessarily a major driver of the local economy (Chen, 2001). Studies conducted with urban populations have found differences in demographics and perceived impacts (Andriotis & Vaughan 2003; Chen, 2000, 2001; Lawton, 2005). These variables may be of importance in an urban destination as these areas may be more demographically diverse than urban areas (Chen, 2000). In addition, among the few studies in urban destinations, these have not looked beyond resident only perceptions of tourism impacts and have not included perspectives from other community groups such as tourism businesses interests (Andriotis, 2005).

**Study Site**

Over the last decade, downtown Indianapolis, Indiana has experienced significant growth in tourism. Indianapolis, an urban destination, is the 13th largest city in the U.S. with a city population of 876,000 people and a metropolitan area population of approximately 1.6 million people. Indianapolis is easily accessible as more interstate highways intersect with the city than any other in the United States (ICVA, 2008a).

Since 1994, the attendance at tourist attractions in downtown Indianapolis has increased over 273% to approximately 16.5 million visits annually (Indianapolis Downtown, Inc., 2008). One form of tourism on which Indianapolis has particularly focused is sport tourism. In the late spring of 2005, the Indiana General Assembly passed legislation that would provide seed funding and approval for an expanded convention center and a multiuse stadium in downtown Indianapolis (Olson, 2005). The plan for the development included $48 million promised to the pro football franchise, the Indianapolis Colts, to keep the team located in the city (Fritze, 2005). City officials devised a plan and successfully enticed not only the residents of Marion County in Indianapolis to pass a 2% food and beverage tax to fund the development, but also successfully persuaded six of the seven surrounding
counties to pass a 1% food and beverage tax (Olson, 2005). The plans were sold to the Indianapolis residents as an economic boom and social energy not only to the immediate downtown area and Marion County, but as an influx to the surrounding counties as well. An expanded convention center would allow for larger and more lucrative convention visitor groups. The Indianapolis Downtown, Inc. (IDI) group reported that the economic impact from convention groups is expected to increase to more than $2 billion annually (IDI, 2008).

The area is rich in event sport tourism activities including the Indianapolis 500 and Brickyard races, Formula One Race, professional basketball and football franchises, a minor league baseball team, and host to NCAA women’s and men’s basketball tournaments. The city was recently awarded the women’s and men’s NCAA Final Four basketball tournament every four years starting in 2010 for a 32 year period. Therefore, starting in 2010, the Men’s tournament will be hosted by Indianapolis in the even years starting in 2010 and ending in 2042. The Women’s tournament will be in the city starting in 2013 and every four years through 2041.

The city also offers a myriad of attractions and events within each market segment. In 2001, the mayor of the city of Indianapolis launched a cultural tourism initiative to build upon the existing cultural attractions and market these resources more effectively. As a result, six districts banded together as the Indianapolis’s Cultural District to promote and showcase the local cultural and artistic offerings reflecting the character and diversity of the community (ICVA, 2008b).

Indianapolis is also invested in convention tourism. The convention center currently has over 403,000 square feet of meeting and exposition space (ICVA, 2008d). The convention center hosts national conventions such as the Future Farmers of America Convention and Gen Con, a fantasy game convention attracting approximately 60,000 and 25,000 delegates respectively (ICVA, 2008c). In addition, the convention hosts regional conventions such as the 11-day Indiana Black Expo Summer Celebration attracting nearly 300,000 attendees (Indiana Black Expo, 2008). The number of hotel rooms in the Indianapolis region totals 21,421 divided among 162 hotels (ICVA, 2008a).

In addition, the city’s cultural tourist attractions include the largest children’s museum in the world, the Children’s Museum of Indianapolis. The Museum receives over one million visitors annually, is situated on 14 acres of land in downtown Indianapolis and presents thousands of programs and activities every year (The Children’s Museum of Indianapolis, 2008). Recent additions to the city’s cultural offerings include the underwater dolphin viewing experience at the Indianapolis Zoo and a major expansion at the Indianapolis Museum of Art. The Indianapolis Zoo is located in White River State Park with 64 acres dedicated to the zoological area for animals, plants and people to interact. White River Gardens is also included as part of the Indianapolis Zoo with an additional 3.3 acres for a botanical attraction. In addition to the exhibits, there are shows such as the dolphin adventure show, elephant encounters, and food and beverage outlets (Indianapolis Zoo, 2008). Founded in 1993, the Indianapolis Museum of Art is considered one of the largest and oldest art museums in the United States. Its permanent collection houses more than 50,000 pieces of art and the Museum also hosts national and international exhibitions (Indianapolis Museum of Art, 2008).
Method

Participants
The sample for this study consisted of current members of the Indianapolis, Indiana Convention and Visitors Association (ICVA). In the winter of 2006, there were approximately 1,245 individual members in the Indianapolis area. ICVA members were ideal participants for their knowledge of the different tourism market segments under investigation here in this study. ICVA members routinely received training and information through newsletters, press releases, meetings, and updated information on the ICVA website that enabled them to distinguish between the different types of tourism and be able to identify the sport tourist in their city. Thus, the major assumptions of the study were that: ICVA members viewed cultural tourism, convention tourism, and sport tourism distinctly from one another; ICVA members perceived impacts from cultural tourism, convention tourism, and sport tourism either positively or negatively; and ICVA members were also residents in the Indianapolis area.

Data Collection
A sample of the entire list of 1,245 ICVA members was used in this study. The data were collected through a traditional paper and pencil questionnaire administered by mail following the traditional Dillman (2000) method. After four mailings, a total of 347 surveys were returned. Of these, 17 were returned for insufficient or unknown addresses reducing the population to 1,228 possible respondents, a response rate of 26.8%. In addition, 13 surveys were received only partially completed. Since the needs of an adequate sample size were met without these additional surveys, they were omitted from further analysis. Therefore, 317 surveys were used for the remainder of the data analysis, an overall response rate of 25.8%. This response rate is consistent with other tourism impact research with surveys administered by mail. Chen (2001) experienced a response rate of 13%, Vogt and Jun (2004) obtained 26%, and Liu and Var (1986) accomplished 21%.

Nonresponse
An examination for the possibility of nonresponse was also performed. Nonresponse bias occurs when the characteristics of the ICVA members who responded to the survey are different than the ICVA members who did not respond to the mailing (Australian Bureau of Statistics, 2001). To determine if those who returned surveys were different from those who did not, an analysis of the percentage of females and males who returned questionnaires and the total percentage of females and males in the ICVA membership was compared using estimates. The $\chi^2$ value of 1.083 ($df = 1$) was not significant. To have significance at the $p < .05$ level, the chi square value should be greater than or equal to 3.84. This implies that the sampled population was not statistically different in gender representation than the total ICVA membership.
Measurement

The instrument used in this study contained two sections. The first concentrated on generating a demographic profile of the respondents including gender, age, length of residency in the Indianapolis area, and highest level of education completed. The second section contained statements assessing ICVA members’ perceptions of the impact that sport tourism may have in the Indianapolis area. Consistent with other tourism impact studies, participants were asked to rate each statement on a five point Likert-type scale. A value of one denoted a negative response (strongly disagree) and a five represented a favorable response (strongly agree). Some items were reverse coded during data entry for consistency.

The individual impact statements were derived from the survey questionnaires developed by Liu, Sheldon, and Var (1987) on the environmental impacts and by Akis, Peristianis, and Warner, (1996) on social and economic impacts. The original scale was a 16 item questionnaire investigating the three tourism areas of social, environmental, and economic impacts and support for tourism development.

The initial questionnaire was pretested for this study with a convenience sample of 25 convention and visitor bureau members from a neighboring city. The pilot study allowed for the opportunity to gain feedback on the clarity of the directions, the chance to check the face validity of the statements, and establish a baseline for the length of time needed to complete the questionnaire. As a result from the pilot study, modifications from the original instrument were made. The city’s name was added in each question to ensure that the participant considered only the impacts sport tourism has on Indianapolis specifically.

Results

The data were first analyzed to present a description of the participants in the study and provide a description, computed as averages, for each statement on the survey instrument. The remainder of the analysis of the data tested between social, environmental, and economic tourism impacts and support for development in the sport tourism market segment through exploratory factor analysis (EFA). The purpose of the EFA was to group together correlated variables (Tabachnick & Fidell, 2001). A standard multiple regression allowed for an examination of which tourism impacts, either social, environmental, or economic, were significant predictors of support for sport tourism development. Finally, a series of analysis of variance (ANOVA) tests were used to examine any differences in support for this market segment and the participant demographics.

Participant Demographics

There were slightly more females than males in the sample. A majority of the participants were aged 36–55 years of age, comprising approximately half of the total respondents. Interestingly, most of the participants appeared to have lived in a different geographic area before taking residence in Indianapolis. A large percentage, 65.9% of the participants had lived in Indianapolis 30 years or less. Moreover, the largest percentage of respondents, 30.5%, has resided in the area for less than 10 years. The participants were well educated, with 71.7% reporting
a completed bachelor’s degree or higher. Those individuals marking the “other” category also reported advanced education with the completion of a law degree or attending dentistry school.

**Description of Individual Measurement Items of Perceived Impacts**

Table 1 illustrates the means, standard deviations, and maximum and minimum values for each item in the model.

Descriptively, the ICVA members had a high agreement that sport tourism creates more jobs (M = 4.48) and gives economic benefits to local and small

<table>
<thead>
<tr>
<th>Impact Area and Variables</th>
<th>M</th>
<th>SD</th>
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<tbody>
<tr>
<td><strong>Social impacts</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1. Sport tourism has increased the crime rate in Indianapolis</td>
<td>3.95</td>
<td>.94</td>
</tr>
<tr>
<td>2. Local residents have suffered from living in a sport tourism destination area</td>
<td>4.26</td>
<td>.90</td>
</tr>
<tr>
<td>3. Sport tourism has encouraged a variety of cultural activities by the local residents</td>
<td>3.69</td>
<td>.92</td>
</tr>
<tr>
<td>4. Meeting sport tourists from other regions is a valuable experience to understand their culture and society</td>
<td>3.87</td>
<td>.86</td>
</tr>
<tr>
<td>5. Sport tourism has resulted in positive impacts on the cultural identity of Indianapolis</td>
<td>4.05</td>
<td>.93</td>
</tr>
<tr>
<td><strong>Environmental impacts</strong></td>
<td></td>
<td></td>
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<tr>
<td>6. Sport tourism provides more parks and other recreational areas</td>
<td>3.30</td>
<td>1.03</td>
</tr>
<tr>
<td>7. Our roads and public facilities are kept at a high standard due to sport tourism</td>
<td>3.26</td>
<td>1.09</td>
</tr>
<tr>
<td>8. Sport tourism has provided an incentive for the restoration of historical buildings and the conservation of natural resources</td>
<td>3.15</td>
<td>.94</td>
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<tr>
<td>9. Sport tourism has resulted in traffic congestion, noise and pollution</td>
<td>2.86</td>
<td>1.19</td>
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<tr>
<td>10. Construction of sport tourist facilities has destroyed the natural environment</td>
<td>3.79</td>
<td>1.04</td>
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<tr>
<td><strong>Economic impacts</strong></td>
<td></td>
<td></td>
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<tr>
<td>11. Sport tourism has created more jobs for Indianapolis</td>
<td>4.48</td>
<td>.69</td>
</tr>
<tr>
<td>12. Sport tourism has given economic benefits to local people and small businesses</td>
<td>4.40</td>
<td>.77</td>
</tr>
<tr>
<td>13. My standard of living has increased considerably because of sport tourism</td>
<td>3.37</td>
<td>1.03</td>
</tr>
<tr>
<td>14. The prices of goods and services have increased because of sport tourism</td>
<td>2.84</td>
<td>1.09</td>
</tr>
<tr>
<td>15. The cost of developing sport tourism facilities is too much</td>
<td>3.50</td>
<td>1.22</td>
</tr>
<tr>
<td><strong>Support for development</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16. I support sport tourism in Indianapolis</td>
<td>4.56</td>
<td>.78</td>
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</table>
businesses ($M = 4.40$). However, the other economic impact statements suggested a lack of unity among the respondents if their standard of living had improved, prices of goods or services had increased, or if the cost of developing sport tourism facilities was too much. There was wide disagreement among the respondents with the perceived environmental impacts in regards to sport tourism. ICVA members were split if sport tourism promotes higher quality roads and public facilities ($SD = 1.09$) and whether it contributes to increased traffic, noise, and pollution ($SD = 1.19$). Other environmental impact areas with which the respondents appeared to be in disagreement included if sport tourism provides additional parks and other recreational areas for the residents of Indianapolis ($SD = 1.03$) and if construction of sport tourism venues destroy the natural environment ($SD = 1.04$).

The participants reported modest agreement in the social impacts of sport tourism, both in the positive and negative implications. One area the respondents show the greatest support are that local residents have suffered from living in a sport tourism area ($M = 4.26$). However, the participants also showed greater identification that sport tourism has positively impacted the cultural identity of Indianapolis ($M = 4.05$). This seemingly contradiction may be due to the timing of administering the survey. At the time of the mailing, a multipurpose professional football sport stadium was under construction causing noise and street closures. In addition, the NCAA Men’s Final Four basketball tournament was also in close proximity of the mailing. This brought more than 40,000 visitors to the Indianapolis area for the celebration of the championships (NCAA Sports, 2006). ICVA members reported strong support for sport development in Indianapolis ($M = 4.56$).

**Exploratory Factor Analysis**

Before EFA and regression analysis, the data were subjected to meet a number of assumptions. The surveys with missing values were deleted leaving a large enough sample size ($N = 317$) to meet the minimum number of cases recommended for EFA (Tabachnick & Fidell, 2001). Scatterplots revealed no instance of multivariate linearity. Nine cases of univariate outliers were eliminated. Univariate outliers are cases where the standardized ($z$) score exceeded $\pm 3.29; p < .001$ (Tabachnick & Fidell, 2001). One outlier was revealed for the question addressing job creation ($z = –5.029$), three for the question addressing economic benefits for locals and small businesses ($z = –4.0325$), two for the question addressing suffering to local residents from living in a sport tourism destination ($z = –3.949$), one for sport tourism is a valuable experience to understanding local culture and society ($z = –3.614$) and two univariate outliers for the question addressing sport tourism as a positive impact on the cultural identity of Indianapolis ($z = –3.567$).

Once univariate outliers were eliminated, a screen for multivariate outliers was completed for the model. A regression model with a $p < .001$ criterion for Mahalanobis distance (chi-square $39.252$, $df = 16$) was used to identify the multivariate outliers. To determine why the cases contained multivariate outliers, a stepwise multiple regression analysis with a dummy variable as the dependent variable was used to reveal any significant relationships. In the model data set, seven multivariate outliers were identified. A commonality these outliers had with one another was that each reported a strong disagreement with the economic benefits of sport tourism job creation and economic benefit for local and small businesses. These items
had the highest agreement. After these were deleted in the sport tourism model, a total $N = 301$ remained.

Next, corrected item-total correlations were computed for each hypothesized construct (economic, cultural, and environmental perceived impacts). In the economic constructs, correlations ranged from .51 to .72, the items in the cultural impacts ranged from .59 to .78 and the items in the environmental constructs ranged from .52 to .71. All items were greater than .50 and that could not improve the Cronbach alpha score when deleted (Zaichkowsky, 1985). Resulting Cronbach alpha for each section were .76, .72, and .67 respectively.

The factors for the EFA were determined with a SCREE plot, eigenvalue greater than one and % of variance explained. Principal axis factoring with varimax rotation was used. Items with a loading of lower than .40 were eliminated (Tabachnick & Fidell, 2001). Four factors had eigenvalues greater than one and accounted for 37.46% of total variability. The SCREE plot revealed a gradual leveling off after the four factors. Two items did not meet the factor loading criteria and were excluded (standard of living has increased considerably and prices of goods and services have increased due to sport tourism). After the adjustments, analysis was finalized with the four factors totaling 13 items. The original three hypothesized factors of social, environmental, and economic impacts were not fully supported. The positively perceived impacts factored into the proposed separate social, environmental, and economic constructs. The negatively worded items, however, factored all together regardless if they addressed social, environmental, or economic impacts. This split into positive and negative benefits in the social, environmental, or economic factors is similar to Chen’s (2001) results. In that study, the factors split into social costs (negative impacts), social benefits, environmental deterioration (negative impacts), and economic benefits. Therefore, the resulting factors in this study were named consistent with factors found in the literature: “social benefits,” “environmental benefits,” “economic benefits,” and “negative sport tourism impacts” (Chen, 2001; Ko & Stewart, 2002). The reliability coefficients for each factor improved with a .74 for social benefits, .70 for environmental benefits, .72 for economic benefits, and .72 for the negative sport tourism impacts with a correlation of .78 for all items combined. Factor loadings and reliability coefficients are reported in Table 2.

**Predictors of Sport Tourism Development**

A standard multiple regression analysis was used next to examine relationships between the resulting factors established in the EFA and support for development in sport tourism. The four factors were the independent variables and support for development in the sport tourism market segment was the dependent variable. The model can be found in Table 3 and Figure 1.

Social benefits, economic benefits, and perceived negative impacts of sport tourism in general attributed significantly to predicting support for sport tourism development in Indianapolis at $p < .001$ level. The perceived environmental benefits were not a significant predictor. In addition, the beta values for the perceived social benefits were positive. Therefore, as the perceived social and economic benefits increase, so does support for further tourism development.

In addition, the negative beta value for the perceived negative sport tourism impacts reflects a decreased support for further sport tourism development in the
## Table 2  EFA Factor Loadings

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<tbody>
<tr>
<td>Increased crime rate</td>
<td>.676</td>
<td>.040</td>
<td>.187</td>
<td>-.025</td>
<td>.478</td>
</tr>
<tr>
<td>Residents suffer</td>
<td>.659</td>
<td>.149</td>
<td>.283</td>
<td>.002</td>
<td>.514</td>
</tr>
<tr>
<td>Traffic congestion, noise and pollution</td>
<td>.561</td>
<td>.014</td>
<td>.021</td>
<td>.069</td>
<td>.302</td>
</tr>
<tr>
<td>Construction destroying environment</td>
<td>.542</td>
<td>.139</td>
<td>.111</td>
<td>.135</td>
<td>.364</td>
</tr>
<tr>
<td>Development costs too much</td>
<td>.411</td>
<td>.287</td>
<td>.127</td>
<td>.313</td>
<td>.364</td>
</tr>
<tr>
<td>Economic benefits for locals and small business</td>
<td>.157</td>
<td>.764</td>
<td>.138</td>
<td>.174</td>
<td>.660</td>
</tr>
<tr>
<td>Job creation</td>
<td>.077</td>
<td>.636</td>
<td>.169</td>
<td>.184</td>
<td>.474</td>
</tr>
<tr>
<td>Positive cultural identity</td>
<td>.088</td>
<td>.199</td>
<td>.707</td>
<td>.114</td>
<td>.564</td>
</tr>
<tr>
<td>Encourage cultural activities</td>
<td>.140</td>
<td>.279</td>
<td>.507</td>
<td>.139</td>
<td>.385</td>
</tr>
<tr>
<td>Understanding of culture and society</td>
<td>.070</td>
<td>.042</td>
<td>.467</td>
<td>.239</td>
<td>.283</td>
</tr>
<tr>
<td>More parks and recreation areas</td>
<td>.084</td>
<td>.231</td>
<td>.166</td>
<td>.537</td>
<td>.378</td>
</tr>
<tr>
<td>Restoration of historical buildings and conservation of areas</td>
<td>.094</td>
<td>.015</td>
<td>.363</td>
<td>.487</td>
<td>.361</td>
</tr>
<tr>
<td>Roads and public facilities kept at high standards</td>
<td>.070</td>
<td>.225</td>
<td>.085</td>
<td>.406</td>
<td>.226</td>
</tr>
</tbody>
</table>

Eigenvalue 1.789  1.418  1.278  1.056
% of variance 24.13  7.80  4.72  2.93
Cumulative % 24.13  31.93  36.65  39.58
Cronbach’s alpha .72  .72  .74  .70  .78*

*all items combined

## Table 3  Sport Tourism Regression Model

<table>
<thead>
<tr>
<th>Variable</th>
<th>B</th>
<th>SE B</th>
<th>β</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social benefits</td>
<td>.294</td>
<td>.054</td>
<td>.297</td>
<td>.000*</td>
</tr>
<tr>
<td>Environmental benefits</td>
<td>.060</td>
<td>.047</td>
<td>.068</td>
<td>.203</td>
</tr>
<tr>
<td>Economic benefits</td>
<td>.265</td>
<td>.063</td>
<td>.244</td>
<td>.000*</td>
</tr>
<tr>
<td>Negative impacts</td>
<td>-.238</td>
<td>.052</td>
<td>.228</td>
<td>.000*</td>
</tr>
</tbody>
</table>

Note.  $R = .584; R^2 = .332$
*Significant at the $p < .001$
city. The resulting model represents a variance of 34.1% in predicting ICVA member support for sport tourism.

**Differences in Tourism Support and Participant Demographics**

To answer the second research question, a series of one-way analysis of variance (ANOVA) were performed to assess differences in the sampled population’s demographic and support for development in the sport tourism market segment. The demographic variables of gender, age, length of residence, and highest level of education completed were independent variables and the support for sport tourism was the dependent variable for each ANOVA. There were no significant differences found between the individuals in their demographics and support for sport tourism development. The results are illustrated in Table 4.

However, there was a noticeable descriptive difference between males and females and support for sport tourism. Although not statistically significant, men in general were more likely to support the development of sport tourism than women in the sample.

**Table 4  Analysis of Variance for Support for Sport Tourism**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td>3.504</td>
<td>.062</td>
</tr>
<tr>
<td>Age</td>
<td>5</td>
<td>.997</td>
<td>.485</td>
</tr>
<tr>
<td>Length of residence</td>
<td>5</td>
<td>.652</td>
<td>.977</td>
</tr>
<tr>
<td>Level of education</td>
<td>4</td>
<td>.116</td>
<td>.975</td>
</tr>
</tbody>
</table>
Discussion

Not surprisingly, the regression analysis supported the social exchange theory and showed that the economic benefits appear to have the greatest influence on whether ICVA members support further sport tourism development. This may be attributed directly to the population sampled for this study. ICVA business members rely on tourism as a main source of income and its continued viability is paramount not only for their businesses, but for their own personal livelihood. Likewise, they may be less concerned about social impacts because these are more widely felt by residents who do not work in the tourism industry, both positive and negative impacts.

The social benefits of sport tourism was also a large factor in predicting support for further development. The city of Indianapolis and its residents have a long history of identifying with sports. The Indianapolis 500 car race that began in 1911 has been a major draw for visitors to the city (Indianapolis Motor Speedway, 2008). The venue itself has over 250,000 permanent seats. (Cavin, 2004). Moreover, the city is home to professional sport teams such as the Indianapolis Colts professional football team, the Indianapolis Pacers professional basketball team, and the Indianapolis Indians minor league baseball team. ICVA members may feel that residents suffer from living in a sport tourism area, however, others seemed willing to overlook these negative consequences to receive the financial gain from the sport tourist dollars. This supports the premise of the social exchange theory that residents seek gains for themselves and are always trying to win in the end (McGehee et al., 2002). For example, the NCAA Men’s Final Four collegiate basketball tournament brought an estimated $40 million economic impact to Indianapolis (NCAA Sports, 2006).

The EFA analysis did not reveal the hypothesized split into social, environmental, or economic factors. This could be due to the timeliness of the data collection period as described earlier. The participants in this study may not have discriminated among the social, environmental, and economic impacts and merely have felt negative in general toward sport tourism at the time. In addition, the ICVA members may be showing signs of fatigue with the two market segments of convention and sport tourism. This is illustrated by the overwhelming support and high identification with only the positive impact statements for social tourism and less support and identification of negative impacts for the other two market segments. The convention and sport tourism models revealed a split of the social impacts into a social costs category that exemplified their beliefs that residents’ quality of life is negatively impacted by convention and sport tourism.

The ICVA members indicated that sport tourism did not necessarily enhance their standard of living and residents suffered from living in a destination that caters to sport tourism. This supports the findings of Avgoustis et al. (2005) who reported that the residents of Indianapolis find their quality of life to be enhanced mostly by the cultural tourism attractions in the city as an alternative to sport tourism. Thus, for the leaders in Indianapolis, deciding on what type of distinct destination branding or image will be a key factor in tourism development (Ashworth, 1991; Jago et al., 2003). Since branding provides a focus for effective marketing (Chalip & Costa, 2006), matching sport event brands and destination brands in Indianapolis will be essential.

The sport tourism model also displayed a high identification with the negative environmental impacts, unlike cultural or convention tourism. Doxey’s (1975)
Irridex Model could also explain this phenomenon. The Irridex Model suggests that as tourism is developed in a destination with capital additions and increased visitors, residents move from a euphoria state in which tourists are welcomed to an annoyance, and later, antagonistic stage. In this latter stage, residents are unhappy with the masses of tourists, develop negative stereotypes about them, and begin to act out on their dissatisfaction with open hostility to these types of visitors. The emergence of the negative identification with tourism impacts for convention and sport tourism may indicate that residents may be moving into the annoyance and antagonistic stages with these types of tourists. In addition, the urban nature of this study site could possibly have played a role and be a reason why the environment was not as relevant to these participants.

Another possible explanation for the negative identifications for sport tourism could be due to the perceived seasonality of sport tourism. For example, the Indianapolis Colts football season is concentrated in the fall months, the Indianapolis Pacers in the winter, and the Indianapolis 500 car race is concentrated in the month of May. Residents may be more likely to be disgruntled with the sport tourist due to this perceived seasonality. Past research has investigated how seasonality has negative effects on a destination (Allcock, 1989). In some cases, sport events can be used to combat seasonality (Higham & Hinch, 2002). Future inquiries could explore seasonality specific to sport tourism as it is a misunderstood area.

Tourism planners, knowing that social impacts have considerable importance over the economic benefits with tourism development in the city, can monitor quality of life issues for residents and can lead to “resident friendly” initiatives such as “resident only” days at the tourism facilities. Lawton (2005) suggests that residents who use tourist attractions on a regular basis perceive them more as community recreational facilities and thus “divorce them subconsciously from the broader and more abstract realm of tourism” (p. 197). Moreover, monitoring quality of life issues as associated with tourism development can be especially beneficial to tourism planners.

These results can aid tourism planners in the city toward understanding how to create a responsible and sustainable tourism destination. “Responsible tourism is based on the (UNWTO) triple bottom line of sustainable development, and is premised on the need to strike a balance between the social, environmental, and economic dimensions of tourism. Responsible tourism is also concerned with balancing the positive and negative impacts of tourism, with a view to assuring “net benefits” for local destination stakeholders” (SANGONet, 2008). Sustainable tourism policies, practices, and guidelines should reflect the multifaceted nature of the tourism industry and need to be embedded in the day to day operation at the destination.

In the development of the Urban Tourism Impact Scale, the survey replicated in this study, Chen (2001) reverted back to the basic concepts of sustainability by grouping the predictors into the traditional concepts of social, environmental, and economic impacts. This replaced the method established by Perdue et al. (1990) to consolidate the predictors into merely positive or negative impacts and allows for a more concise picture of what specific types of impacts influence support for sport tourism. The results here revealed that economics remain a main driver behind support for development. However, both the positive and negative perceived social impacts played a larger role in predicting support for tourism development in all three market segments.
Conclusion

This study assessed the perceived impacts of tourism in Indianapolis by examining ICVA business community members’ attitudes toward sport tourism in their destination. Overall, sport tourism was supported by the participants. However, there was some indication of variability in terms of how much support they are willing to give with the relationships of negative tourism impacts affecting their support with convention and sport tourism.

The findings of the study have both theoretical and applied implications in the tourism industry. Overall, the theoretical implications for the social exchange theory were supported in the findings for this study. Although the traditional manner of viewing impacts did not factor into the social, environmental, or economic constructs, the ICVA members’ responses naturally sorted themselves out into positive and negative factors. These perceptions positively or negatively affected their subsequent support of tourism development. Thus, on the one hand, for ICVA members, the negative impacts adversely affected their support for sport tourism. On the other hand, the positive social and economic benefits led to increased support for additional development. These variables also contributed as significant predictors for support.

The identification of negative impacts for the sport tourism model has practical applications for sport tourism management and policy makers in Indianapolis. The results indicate that the residents may not be necessarily satisfied with the downtown development of the new multisport facility. Instead, they preferred the development of cultural tourist attractions such as a performing arts center. These differing viewpoints reflect the need that state and local tourism development officials should tailor their decisions based upon the community’s needs (Andereck & Vogt, 2000). Community support, therefore, leads to the success of tourism in the destination.

The continuation of examining tourism impacts from the different market segments offers exciting insights into resident perceptions of tourism in their communities. This can help explain why residents may support one type of tourism development over another (Harrill, 2004). Andereck and Vogt (2000) recommended that defining ‘development’ is useful for residents in forming their attitudes on tourism development. By asking residents to rate their perceptions based upon a particular market segment such as sport tourism as used in this study, residents have a clearer idea of what development may mean.

Lastly, tourism officials, armed with this knowledge of the sport tourism market segment, understand that residents may be feeling more of the negative effects and can engage in a positive public relations campaign to remind residents of the positive benefits behind sporting attractions in the city. Perdue et al. (1990) claim this can be most effective in swaying resident opinion to support tourism development in a destination.

References


