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Assessing the Economic Impact of Sport Tourists' Expenditures Related to a University's Baseball Season Attendance

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The exposure of college baseball has grown dramatically in recent years due to increased television coverage. For many communities, the expenditures of sport tourists related to attending baseball games can significantly benefit the athletic department, local business, and the community as a whole. Thus, the purpose of this study was to address the lack of economic impact studies on college sporting events. In order to assess the economic impact of the selected college baseball season, expenditure patterns for the study sample (n = 256) were analyzed across eight spending categories including: retail, eating and drinking places, lodging, game tickets and concessions, recreational activities, entertainment, auto, and other. Results from this study suggest sport tourists attending home baseball games at this university provide a significant economic impact to the local economy. On average, sport tourists spent approximately \$106 per game which benefited both the athletic department and local businesses. Information provided by this study can be utilized in several ways by athletic departments, local businesses, and tourist destinations. For university athletic departments, this information can go a long way in supporting revenue-producing decisions, which research suggests is among the top issues facing athletic administrations.

Shipway and Jones (2007) indicate that scholarly inquiry into sport tourism has grown exponentially over the past decade. Sport tourism has been defined as “leisure-based travel that takes individuals temporarily outside of their home communities to participate in physical activities [active sport tourism], to watch physical activities [event sport tourism], or to venerate attractions associated with physical activities [nostalgia sport tourism]” (Gibson & Fairley, 2011, p. 229). One segment of sport tourism garnering much attention is event sport tourism. The economic impact of event sport tourism is significant on local communities throughout the United States. In 2000, the Travel Industry Association of America reported that event sport tourism produced \$27 billion in the United States. In that same year, approximately 38% of US adults attended a sporting event, competition, or tournament as a spectator or participant, while on a trip of 50 miles or more (Travel Industry Association, 2001).

Turco and Eisenhardt (1998) purport destinations throughout the United States vie for the opportunity to host sport tourism related events. Various motivations exist why destinations consider sport tourism events so appealing. Hinch and Higham (2004) suggest sport tourism assists in image development and exposure of a destination. Turco (1998) asserts sport tourism provides entertainment for local residents and enhances community pride. Regardless of these positive contributions of sport tourism to communities, the primary motivation for hosting professional and amateur sporting events is the anticipated economic impact generated by sport tourists (Gratton, Dobson, & Shibli, 2000; Irani, 1997).

Crompton and McKay (1994) define the economic impact of an event as “...the net economic change in a host community, excluding non-market values, which results from spending attributable to the event” (p. 33). Providing clarity to the definition, Doshi, Schumacher, and Snyder (2001) state that event economic impact:

Estimates the net impact of money originating from outside the region and the money that stays in the local economy. It represents the incremental spending above and beyond what would be expected in the region if the event was not held (p. 2).

Mondello and Rishe (2004) indicate numerous economic impact studies have been conducted on hallmark events, while far less has investigated the economic impact of small-scale sport events. Hall (1989) defines hallmark events as “major fairs, expositions, cultural, and sporting events of international status which are held on either a regular or one time basis” (p. 263). An example of a hallmark sport event is the Olympics. Hallmark events are appealing because of the ability of these events to position the host city as an international tourist destination and facilitate tourist activity for years after the event (Gibson, Qi, & Zhang, 2008). However, several researchers suggest hallmark events potentially have as many negative consequences as positive impacts (Henderson, Foo, Lim, & Yip, 2010; Kasimati, 2003; Ohmann, Jones, & Wilks, 2006). Other researchers indicate hallmark events result in substantial financial obligations for the host communities (Henderson et al., 2010), potential corruption during the bid process (Kasimati, 2003), and often result in the displacement of local residents due to infrastructure improvements (Ohmann et al., 2006).

Higham (1999) defines small-scale sport events as “regular season sporting competitions (ice hockey, basketball, soccer, rugby leagues), international sporting fixtures, domestic

competitions, Masters or disabled sports, and the like” (p. 87). As can be discerned from the definition, small-scale sport events may be competitions with small local fan bases and/or competitions that attract national and international interest. College sporting events are an example of small-scale events. Daniels and Norman (2003) indicate small-scale sport events may provide more positive impacts for the host city compared to hallmark events because small-scale sport events typically operate within existing infrastructure, necessitate minimal investments from government, and result in manageable crowds and congestion.

Matheson (2006) provides additional reasons why small-scale sport events are likely to generate more positive economic impacts than hallmark events. First, visitors associated with small-scale sport events tend not to crowd out normal visitors and travelers. Second, the cost of hosting small-scale sport events is significantly lower compared to hallmark events. Finally, the probability of small-scale events producing large variations in local economic sectors is much less compared to hallmark events, which improves the accuracy of small-scale studies conducted using multiplier analysis (Matheson, 2006).

Several researchers identify a dearth of literature on small-scale sport events (Daniels & Norman, 2003; Gibson, Wilming, & Holdnak, 2003; Hallmann & Breuer, 2011). Discussing small-scale sport events, Gibson et al. (2003) highlight a lack of research focusing on collegiate sport events. These authors suggest college sport events have the ability to stimulate local economies through the expenditures of tourists, as well as improve the destination’s visibility to potential travelers. Similarly, Irwin and Sandler (1998) indicate sport tourists attending college sport events are likely to inject new money into the local economy through expenditures on lodging, food and beverages, retail products, and other goods and services. However, athletic administrators, event organizers, and local tourism organizations frequently do not have quantifiable information related to the expenditure patterns of sport tourists and/or estimates of the economic impacts of college sport events. Supporting this claim, Gumprecht (2003) purports a lack of research concentrating on the economic contributions of college athletics on local communities. Thus, the objective of this article is to provide an analysis of sport tourists’ expenditures and resultant economic impact of these expenditures over a season of a college sport, baseball.

Literature Review

Economic impact studies are frequently utilized in sport to estimate the economic benefits of various events and facilities (Siegfried & Zimbalist, 2000). Siegfried and Zimbalist (2002) indicate economic impact studies are often conducted to publicize the economic benefits generated by sport events, as well as support the use of public subsidies on various sport projects. However, Coates and Humphreys (2008) examined the economic impact literature on professional sport teams and stadiums and concluded research by economists and academicians did not support the notion that these sport entities contribute sustained economic benefits to host communities. While studies have been conducted to support the use of public subsidies, a significant amount of literature suggests that these justifications based on economic impact are not warranted.

The concept of economic impact is based on the theory that expenditures from non-local residents injected into a local economy will benefit local residents (Tyrrell & Johnston, 2006). The conceptual framework for commissioning economic impact studies was provided by Crompton (1999). The framework begins with residents and visitors paying taxes to local

governments. Government decision-makers allocate a portion of the tax revenues on sport and tourism facilities and programs in hopes of attracting non-local residents to the community. When non-local residents visit the community, they inject new money into the local economy through expenditures on various goods and services. This injection of new money creates jobs and increases the personal income of local residents, which in turn benefits local residents.

Many researchers conduct economic impact studies with integrity. However, Crompton (2006) identified several areas where authors implement inappropriate methods to inflate the economic impact estimate. Four of the most common inappropriate procedures used by researchers to generate high economic impact estimates include: inclusion of local residents, the use of sale rather than income multiplier, misrepresentation of employment multipliers, and the failure to exclude casuals (Crompton, Lee, & Shuster, 2001). Regarding the inclusion of local residents, only expenditures by non-local residents that reside outside the study region should be included in the economic impact of an event. The expenditures of local residents at a local sport event are a redistribution of spending from one economic sector to another.

In terms of the multiplier, Crompton (1995) indicates the sales multiplier is significantly larger than the income multiplier utilized in economic impact software. Using a sales multiplier will assist researchers in producing a larger economic impact estimate. Furthermore, the purpose of the analysis is to determine the impact of visitor spending on household income, signifying the need for an income multiplier instead of a sales multiplier. Crompton (2006) purports employment multipliers estimate the impact of visitor spending on the local economy. Often times, researchers report the employment estimates generated by economic impact software as full time jobs. However, the employment estimates produced by the software include full-time, part-time, and seasonal jobs.

Finally, *casuals* are visitors who are attracted to the area by other destination attractions but choose to attend the sport event. Crompton et al. (2001) suggests these individuals (i.e., casuals) should not be counted in the economic impact of the sport event because the sport event was not their primary reason for visiting the destination. Hence, the expenditures of casuals would occur in the destination regardless of the sport event.

Another inappropriate procedure employed in economic impact analyses is the inclusion of time-switchers (Crompton, 2006). Crompton (2006) indicates that time-switchers are those non-local visitors who change the timing of a previously planned trip to coincide with a sport or tourism event. Frechtling (2006) purports isolating time-switchers can be very challenging because the researcher is asking the visitor to predict if they would still have visited the destination for the event did not occur. Frechtling (2006) also suggests destinations that individuals are likely to visit several times during a year (i.e., college sport events or destinations with numerous attractions) “should not affect the eligibility of these expenditures; they all are attributable to the event” (p. 29). For example, if we had asked respondents if they would have come to the destination in the next 6 months/1 year, it is likely that many would have responded “yes.” The respondents may have had plans to attend another baseball game or attend a game during the football season as well as the game in which the respondent was surveyed. For these reasons, the current study did not exclude time-switchers. Chhabra, Sills, & Rea, (2002) purport tourists’ expenditures are one of the most important variables in the economic analysis of a destination’s tourism industry. Irwin and Sandler (1998) were among the first to identify the economic potential of sport tourists’ expenditures related to college sport events. The purpose of their research was to assess the expenditure patterns of individuals attending 10 National Collegiate Athletic Association (NCAA) championship events. Their study indicates sport

tourists' expenditures significantly contribute to a destination's local economy. In addition, Irwin and Sandler (1998) suggest tourism agencies in destinations hosting college sport events should develop relationships with universities in order to market the event and destination more effectively to potential sport tourists.

Gibson et al. (2003) highlighted the lack of research on the college sport events as a tourism attraction. Their study examined various tourism related behaviors of sport tourists attending a university's college football games. Results of the investigation indicate sport tourists inject a significant amount of expenditures in tourism related businesses within local communities. Gibson et al. (2003) suggest college sport events draw a significant number of sport tourists to the host destination, and the expenditures of these sport tourists significantly contribute to the local economy. The authors suggest college sport events have the potential to assist destinations hosting these events develop their overall tourism product.

Mondello and Rishe (2004) indicated a lack of economic impact studies in academic publications focusing on NCAA events. These authors focused on the economic impact of various NCAA sport events. Economic impact estimates were provided for the 2001 Women's Final Four in St. Louis, Missouri, 2002 Women's Final Four in San Antonio, Texas, 2003 Men's South Regional in San Antonio, Texas, 2000 NCAA Wrestling Championship in St. Louis, Missouri, and the 2002 Missouri-Illinois football game. The 2001 and 2002 Women's Final Four generated estimated economic impacts of \$20.9 million and \$32.9 million, respectively. The estimate economic impact of the 2003 Men's South Regional was \$10.7 million, and the 2000 NCAA Wrestling Championship had an economic impact of \$7.0 million. The Missouri-Illinois football game in St. Louis generated an estimated \$3.8 million in economic impacts. Mondello and Rishe (2004) purported the variations in economic impact estimates were due to the number of non-residents attending the events, the distance of teams involved in the events to the destination, the expenditure patterns of non-residents, and the length of stay of non-residents.

Baade, Baumann, and Matheson (2008) emphasized the dearth of academic economic impact studies on collegiate sport events. Their article develops a statistical model using secondary data that forecasts the economic impact of college football programs by comparing the normal economic activity in host communities to the economic activity with additional games and/or a successful program. The authors sampled 63 metropolitan statistical areas which included the majority of big-time college football programs. Results from the analysis suggest additional football games or a winning program do not produce significant benefits on employment and personal income in host communities. The authors concluded that economic impact research of collegiate sport events and spectator sports in general is essential information for sport organizations, event planners, destination makers, and local decision makers.

Baade, Baumann, and Matheson (2011) evaluated the benefits of college sport programs in general, focusing on football and men's basketball games in two southeastern American cities. Utilizing 27 years of available data, the authors concluded that home football games yielded gains of \$2 million each game, while basketball games had no significant impact. The findings also suggest that while positive benefits exist for the host universities, any sustainable benefits to the host community may be difficult to assess.

Coates and Depken (2009) highlighted the limited number of economic impact analyses conducted on the effects of college sports on host communities. The main purpose of their research was to investigate the economic impact of college football games on sales tax revenue in four university cities in Texas. Results from their analysis revealed that college football games impact sales tax revenue in varying degrees, but the impact on employment and income is

negligible. In a subsequent study, Coates and Depken (2011) examined the economic impact of various sport events in the same state of a 15 year period. Similar to the previous study, the purpose of the study was to estimate the impact sport and entertainment events had on sales tax revenue in different cities of the same state. The authors indicated that college football games had a positive impact on sales tax revenue, while college bowl games, NFL regular season games, and NBA playoff games had no impact. Coates and Depken (2011) suggested economic impact analyses are important because they provided essential information to decision makers related to the value of sport events.

To the author's knowledge, the only economic impact analysis conducted on college baseball was provided by Goss (2003). Goss (2003) performed an economic impact analysis of the 2003 College World Series on the city of Omaha. The author indicated the College World Series is a major tourism attraction for Nebraska that attracts a large portion of visitors from outside the state who attend the baseball tournament, as well as other local tourism attractions. The expenditures of these sport tourists inject a significant amount of money into the local economy. The estimated economic impact of the 2003 College World Series from this injection of sport tourists' expenditures was \$33.8 million. Goss (2003) indicated the College World Series produced a significant economic impact to the local economy of Omaha. The author also highlighted the importance for communities hosting sport events to conduct economic impact studies to assist in determining the benefits these events provide local communities.

Agha (2011) conducted a related study by investigating the economic impact of Minor League baseball teams and stadiums had on their host communities. Using approximately 20 years of data, the research analyzed the impact Minor League baseball had on per capita income in communities that host teams. The author reveals that AAA Minor League teams and AA Minor League stadiums positively affects per capita income. Agha (2011) indicates that these findings are in opposition to results concerning major league data.

The available literature on the economic impact of college sporting events is sparse (Baade et al., 2008; Gumprecht, 2003; Mondello & Rishe, 2004). Each year, millions of sport tourists travel varying distances to attend collegiate sport events. Mak (2004) indicated additional analysis on tourists' expenditures needs to be conducted to assist event organizers and destinations with marketing and policy formulation. The purpose of this article is to address the lack of economic impact studies on college sport events. More specifically, the research questions guiding this study are: (1) What are the expenditure patterns of non-local residents attending a university's baseball games? and (2) What is the estimated economic impact of these sport tourists' expenditures on the local economy?

In many parts of the United States, the popularity of college baseball is rapidly growing. In 2010, total home attendance for the top 50 universities reported by the National Collegiate Athletic Association (NCAA) in Division I was over 5 million (ncaa.org). This is approximately a 5% increase from the previous year's home attendance figure. A better illustration of the sport's growing popularity is the expanded television coverage of the sport. Over recent years, television coverage of the sport began to include regular season games, NCAA tournament regional and super-regional games, and the total coverage of the College World Series. In 2011, ESPN reported telecasts of the College World Series had an 11% increase in viewers and a 7% increase in households from the previous year.

As college baseball's popularity continues to grow, the economic potential for the institutions and the cities where the universities reside will also increase. For institutions, an increase in popularity will potentially translate into increased ticket sales, merchandise sales, and

sponsorship opportunities. For college towns, an increase in popularity has the potential to boost the number of tourists visiting the area, as well as tourists' expenditures in local businesses. This increase in sport tourists benefits both universities and cities. With college baseball's potential coupled with the lack of research on economic contributions of college athletics and the call for more empirical analysis on small scale sport events, research on the economic potential of sport tourists' expenditures from college baseball attendance seems relevant.

This research differs from previous economic impact studies conducted on college sports in several ways. The majority of previous research conducted to determine the economic impacts of college sports has been *ex-post*, while the current study utilizes an *ex-ante* analysis. Matheson (2006) indicates that *ex-ante* studies on small-scale sport events, such as college baseball, are more accurate compared to similar studies on hallmark events. In addition, the university under investigation is in a small rural town. Many of the previous studies have conducted their analysis on universities in larger metropolitan areas or Metropolitan Statistical Areas. The current study will provide valuable insight to rural communities about the economic potential of college sport events as well as importance of sport tourists' expenditures.

Method

In order to address this call for more research on college athletics, a medium-sized university was selected as the study area. The university under investigation is located in the southeastern part of the United States in a city with approximately 13,000 residents and a university enrollment of 17,500. During the baseball season under investigation, the university athletic department reported total home attendance of 140,040. This home attendance figure was 24,000 less than the previous year and 30,000 less than the subsequent year's home attendance. The year the study was conducted was the first year in 20 years the baseball team did not make the College World Series.

Data were collected at five home baseball games at a southeastern university. Games were selected by assigning a number to each home game in the months of March and April and using a random number generate to identify five numbers within the range provided. The games selected varied by day of the week, ranking of opposing team, and conference versus non-conference opponent (Table 1). An on-site sampling strategy was employed using a systematic sampling procedure with a random start. The procedure consisted of a research team member systematically collecting email addresses from individuals entering the three entrances to the stadium. Research assistants stationed at each entrance would approach every fifth individual that crossed an imagery line and ask the individual to participate in the research study. Individuals willing to participate in the study were asked to provide an email address.

Table 1 - Summary of team schedule and statistics for study period.

Game	Type	Rank	W-L	Score	Day/ Night	Weekday/ Weekend	Attendance
1	Non-Conference	10	L	1-5	Day	Weekend	6258
2	Non-Conference	NR	W	9-7	Day	Weekday	3710
3	Non-Conference	NR	W	11-10	Day	Weekday	3689
4	Non-Conference	NR	W	6-5	Day	Weekday	4132
5	Conference	NR	L	4-6	Day	Weekend	3846

6	Conference	NR	L	6-7	Day	Weekend	3995
*7	Conference	NR	W	16-2	Day	Weekend	4252
8	Non-Conference	21	W	9-6	Night	Weekday	4314
*9	Non-Conference	NR	W	14-2	Day	Weekday	3891
*10	Conference	NR	L	4-5	Night	Weekend	4560
11	Conference	NR	W	3-2	Night	Weekend	4987
12	Conference	NR	W	2-0	Day	Weekend	4546
13	Non-Conference	NR	W	5-4	Night	Weekday	4325
14	Non-Conference	NR	W	2-1	Night	Weekday	4502
15	Non-Conference	NR	L	4-6	Night	Weekday	5973
16	Conference	4	L	2-8	Night	Weekend	6317
*17	Conference	4	L	3-4	Day	Weekend	5893
18	Conference	4	L	4-8	Day	Weekend	5240
19	Non-Conference	NR	L	2-6	Night	Weekday	3674
*20	Non-Conference	14	L	0-6	Night	Weekday	5938
21	Conference	NR	W	13-5	Night	Weekend	4885
22	Conference	NR	W	8-7	Night	Weekend	4707
23	Conference	NR	W	10-2	Day	Weekend	3641

The survey implementation used a modified Dillman (2007) approach. The process began with sending an email with a link to an online questionnaire to individuals willing to participate in the study two days following the game. Two follow-up attempts were made four and eight days after the initial email, respectively. A total of 803 email addresses were collected by the research team and 121 were non-deliverable due to illegible handwriting and/or incorrect email addresses. After deleting the non-deliverable email addresses, the effective response rate was 52.8%. Out of the 359 returned questionnaires, 92 were excluded from the analysis because these individuals indicated they were a student and 11 were excluded for identifying the baseball game was not their primary reason for visiting the local area. Students were excluded from the analysis because the researchers counted them as local residents. The additional 11 respondents were excluded because these individuals were considered casuals and their expenditures should not be included in the analysis according to Crompton (2006). Therefore, results are based on a sample size of 256. Data provided by these respondents were analyzed by utilizing SPSS.

To estimate the economic impact of sport tourists' expenditures from attendance to a university's home baseball games, expenditure patterns of these individuals must be determined. For this analysis, a sport tourist was any individual residing outside the two county region identified by the university's athletic department as their home area. The term sport tourist includes individuals that stayed overnight, as well as sport excursionists (i.e., day trippers). The expenditures of sport tourists are analogous to the direct economic impact because they occur as a direct consequence of the event in the community. Tourists' expenditures inject new money into the local economy generating secondary effects (i.e., indirect and induced impacts). Indirect impacts emerge when recipients of the direct impact expenditures use part of the receipts on purchases of goods and services from suppliers within the economic area. Furthermore, induced impacts are produced by the circulation of wages and salaries paid by employers of related industries to local residents. Total output, as known as the aggregate economic impact, is calculated by summing the direct, indirect, and induced impacts (Fleming & Toepper, 1990).

Respondents were asked to report their trip expenditures into eight categories: retail, eating and drinking places, lodging, game tickets and concessions, recreational activities, entertainment, auto, and other. Per person daily expenditures were calculated by dividing the trip expenditures in the eight categories by the average length of stay of sport tourists. Achieving per person daily expenditures required dividing the daily expenditures by the number of people in the respondent's party for which they were financially responsible. This final value provided the estimate of per person daily expenditures of sport tourists used in the analysis.

Expenditures are only one component utilized in the estimation of economic impact. The number of individuals attending the university's home baseball games and the number of nights they spend in the local area also must be obtained. The average number of nights individuals spent in the local area was calculated based on the responses provided. Calculating the number of sport tourists attending home baseball games for the season was accomplished by making two calculations. First, total home attendance for the college baseball season was multiplied by the percentage of respondents indicating they were students and casuals (25%) to determine the baseline for total home attendance. Next, the baseline total home attendance (excluding students and casuals) was multiplied by the percentage of non-local residents attending the game. Respondents were asked to indicate whether they were permanent residents of the two county study region, as well as providing their home zip code. The two county study region was selected based on information provided by the Athletics Department and the local Chamber of Commerce. The percentage of non-local residents attending home games was estimated by calculating responses to these two questions. Crompton (2001) indicated an appropriate economic impact analysis should only include non-local residents attending the destination specifically for the event under investigation. Respondents were also asked to report whether the university's home baseball game was their primary reason for visiting the destination. Individuals indicating the baseball game was not their primary reason for visiting the destination were excluded from the analysis ($n = 11$).

A characteristic of college baseball is that games occur during the week, as well as the weekend. In order to provide more precise information, the data were segmented into weekday and weekend games. Expenditure patterns for both weekday and weekend sport tourists were calculated, as well as the number of non-local residents that attend each type of game and the average number of nights spent in the local area.

Estimating the county-level economic impact of a university's home baseball season requires the calculation of total expenditures for both weekday and weekend sport tourists in the local area. Calculating the total expenditures of both sport tourists involved multiplying the average per person daily expenditures by number of visitors by average number of nights spent in the local area (Crompton, 1999). The value obtained from this calculation is comparable to the total direct economic impact. However, the total direct economic impact is typically smaller than total expenditures due to the leakage of some expenditures directly out of the local economy.

Total expenditures were calculated for each spending category and inserted into the economic impact software package, IMPLAN version 3.0. IMPLAN is an input-output model that estimates economic impacts by creating a multiplier matrix that accounts for the interdependence of economic sectors within the study region. IMPLAN develops a model of the study region to evaluate the economic impact of an injection of new money into the study region's economy. The IMPLAN software provides an estimation of the economic impact at four levels: direct, indirect, induced and total. Although some researchers have criticized input-output

models, Dwyer, Forsyth, and Spurr (2006) recommend the continued use of input-output models for county or regional analysis.

Results

Demographics

As previously mentioned, the sample was divided into weekday and weekend sport tourists. For the total sample, the majority (70.1%) of attendees to the university's home baseball games were sport tourists. Participants in the study were 56.5% male and 43.5% female. The mean age of sport tourists was 37 years. Approximately 48% of sport tourists were college graduates. The majority (52%) reported an annual household income of \$75,000 or higher. The average distance traveled to attend the university's home baseball games was 61 miles.

For the weekday sample, 59.6% of the respondents were sport tourists. The mean age of weekday sport tourists was 43 years. Approximately 51% of weekday sport tourists revealed an annual household income of \$75,000 or higher. On average, weekday sport tourists were in the local area for one day with 12.3% indicating staying overnight in the destination. When asked how many people they were financially responsible for during their trip, weekday sport tourists reported 1.44 people. The average distance weekday sport tourists traveled to attend the university's home baseball games was 33 miles.

For the weekend sample, 82.2% of respondents were sport tourists. The mean age of weekend sport tourists was 39 years. Over 54% of weekend sport tourists indicated an annual household income of \$75,000 or higher. Weekend sport tourists were in the local area for approximately three days with 51.6% reporting staying overnight in the destination. Weekend sport tourists revealed they were financially responsible for 1.84 people during the trip. The average distance traveled by weekend sport tourists to attend the university's home baseball games was 93 miles.

Expenditures

Chhabra, Sills, and Rea (2002) indicated an important variable in the economic analysis of any tourism attraction is the expenditure patterns of non-local residents in the local area. The mean expenditures of sport tourists attending the university's home baseball games was \$106.50 (Table 2). The three highest expenditure categories were eating and drinking places (\$26.80), game (\$26.28), and accommodations (\$18.47). Segmenting sport tourists into weekend and weekday baseball games attendees indicated weekend sport tourists' mean expenditures were \$162.69, with the highest expenditures in eating and drinking places (\$39.56), accommodations (\$35.12), and game (\$33.88). Weekday sport tourists' mean expenditures were \$56.72, with the highest expenditures in game (\$19.85), eating and drinking places (\$15.01), and auto (\$9.85). Weekend and weekday sport tourists' total expenditures were significantly different ($t = 5.55$, $p < 0.001$). Specific categories in which weekend and weekday sport tourists' expenditures were significantly different include: retail, eating and drinking places, accommodations, game, and auto (Table 2).

Table 2 - Expenditure pattern of sport tourists at a university's home baseball game in local area.

	Total	Weekend	Weekday	t Test	Sig.
Retail	\$12.98	\$23.36	\$3.96	3.96	<0.001
Eating/drinking	26.80	39.56	15.01	4.33	<0.001
Accommodations	18.47	35.12	2.99	4.61	<0.001
Game (tickets, concessions)	26.28	18.88	19.85	3.68	<0.001
Recreation (golf, fishing)	2.82	15.00	3.70	-0.67	0.500
Entertainment	0.56	1.00	0.22	1.18	0.239
Auto-gas/service	17.83	26.97	9.85	4.47	<0.001
Other	0.76	0.72	0.85	-0.16	0.869
Total	\$106.50	\$162.69	\$56.72	5.55	<0.001
	<i>N</i> =256	<i>N</i> =121	<i>N</i> =135		

Estimating the economic impact of sport tourists' expenditures from attending a university's home baseball games begins with the calculation of total expenditures in the local area. This was accomplished by multiplying the average daily expenditures of sport tourists by the number of sport tourists attending home games. For this southeastern university, home baseball game attendance during the 2008 season was 140,040. To account for students and casuals, the total attendance for home baseball games was multiplied by the percentage of students and casuals identified in the data (25%). After this calculation the new baseline total home attendance was 105,030. The baseline home attendance was multiplied by the percentage of non-local residents (70.1%) attending games which produced an estimated number of sport tourists attending the university's home baseball games of 73,626.

In order to provide a more precise economic impact assessment, total expenditures were calculating by segmenting weekend and weekday sport tourists by whether they stayed overnight in the local area. Weekend sport tourists, who stayed overnight, spent \$124.16 per person daily, while weekend sport tourists, who did not stay overnight, spent \$45.11 per person daily. Weekday sport tourist, who stayed overnight, spent \$71.80 per person daily, while weekday sport tourists, who did not stay overnight, spent \$34.20 per person daily. These expenditures were multiplied by the estimated number of non-local residents attending weekend and weekday games segmented by overnight and non-overnight visitors. These estimations were calculated by multiplying the percentage of weekend and weekday respondents that reported staying overnight in the local area, 51.6% and 12.3% respectively, by the estimated number of non-local residents attending these games.

Weekend and weekday sport tourist total expenditures related to attendance from a university's baseball season home games were \$4,128,093 and \$993,472, respectively (Table 3). Aggregate total expenditures of sport tourists from a university's baseball season home games were approximately \$5,121,565 (Table 3). The majority of visitor's expenditures were spent in restaurants and bars, at the game (tickets and concessions), in retail business, and at gas stations (Table 3).

Table 3 - Total expenditures of sport tourists for university's home baseball games.

Categories	Weekend (Overnight)	Weekend (No overnight)	Weekday (Overnight)	Weekday (No overnight)	Total
Retail	\$456,778	\$133,396	\$24,817	\$86,694	\$701,685
Eating/drinking places	\$728,942	\$270,783	\$78,792	\$198,904	\$1,277,420
Accommodations	\$897,666	\$0	\$19,429	\$0	\$917,095
Game (tickets, concessions)	\$434,916	\$422,307	\$15,530	\$285,136	\$1,157,890
Recreation (golf, fishing)	\$47,571	\$7,753	\$10,790	\$61,485	\$127,598
Entertainment	\$2,125	\$15,506	\$0	\$0	\$17,631
Auto-gas/service	\$494,632	\$199,524	\$76,628	\$129,118	\$899,903
Other	\$16,194	\$0	\$0	\$6,148	\$22,343
Total	\$3,078,824	\$1,049,269	\$225,986	\$767,486	\$5,121,565

Economic Impact Analysis

In order to estimate the economic impact of sport tourists' expenditures associated with attendance to the university's home baseball games, total expenditures in each of the eight spending categories were entered into an IMPLAN input-output model of the two county study region. The two county study region was selected based on information provided by the Athletics Department and the local Chamber of Commerce. Results of the analysis are presented as total output, labor income, total value-added, and employment. Total output represents the value of sales by all industries in the study region. Labor income is the sum of employee compensation and proprietor income. Total value-added indicates the sum of employee compensation, proprietor income, indirect business taxes, and other property type income. Employment consists of total wage and salary employees which include both full- and part-time workers.

Based on the results of the analysis, the estimated direct economic impact of sport tourists' expenditures was \$3,846,564 (Table 4). The estimated indirect impact was \$817,848, and the induced economic impact was \$590,378 (Table 4). The resulting total economic impact of sport tourists' expenditures associated with attendance to the university's home baseball games were \$5,254,790 (Table 4). The total economic effect on labor income and total value-added was \$1,426,120 and \$2,327,695, respectively (Table 4).

Table 4 - Economic impact of sport tourist's expenditures.

Impact Type	Employment	Labor Income	Total Value-Added	Total Output
Direct Effect	82.4	\$1,032,437	\$1,597,281	\$3,846,564
Indirect Effect	7.6	\$224,889	\$379,053	\$817,848

Induced Effect	6.8	\$168,794	\$351,360	\$590,378
Total Effect	96.8	\$1,426,120	\$2,327,695	\$5,254,790

The economic activity associated with the university’s home baseball games was estimated to support 96 jobs in the study region. Further analyzing the employment impact, the majority of jobs were supported in spectator sport companies, food services, accommodations, and fitness and recreational sport centers (Table 5). As previously mentioned, the employment estimate provided by IMPLAN is combination of annual full- and part-time jobs supported by the injection of new money into the economy from the event (i.e., college baseball games). The employment estimate represents the number of jobs (i.e., full- and part-time) needed to support the continued infusion of dollars into the local economy resulting from sport tourists. With many sport and tourism activities, the types of jobs created are typically part-time and seasonal in nature with a few full-time positions. Although part-time and seasonal jobs are perceived as less attractive, these types of jobs are necessary for labor markets (Smith, 2006). Smith (2006) suggests that part-time and seasonal jobs are needed by individuals in the labor market and these types of jobs provide vital employment skills for individuals entering the labor market.

Table 5 -Top ten sector with employment creation.

Description	Total Employment
Spectator sports companies	35.3
Food services and drinking places	24.4
Hotels and motels, including casino hotels	14.2
Fitness and recreational sports centers	4.9
Retail Stores – General merchandise	3.3
Retail Stores – Gasoline stations	1.9
Real estate establishments	0.9
Services to buildings and dwellings	0.8
Employment services	0.6
Retail Stores - Miscellaneous	0.5

Discussion

The exposure of college baseball has grown dramatically in recent years due to increased television coverage. For many communities, the expenditures of sport tourists related to attending baseball games can significantly benefit the athletic department, local business, and the community as a whole. However, research on the economic contributions of college athletics on host communities is an area in need of further research (Baade et al., 2008; Grumprecht, 2003). An important component of economic impact studies is the measurement of tourists’ expenditures (Saayman et al., 2005). Wilton and Nickerson (2006) suggest that expenditure analysis can provide useful information in the development of marketing strategies for organizations, in particular by providing more concrete information about the target market.

Results from this study suggest sport tourists attending home baseball games at this university provide a significant economic impact to the local economy. On average, sport tourists spent approximately \$98 per game which benefited both the athletic department and local businesses. Over an entire baseball season, sport tourists' expenditures generated a direct impact of \$5,146,960 with an additional \$1,803,062 in indirect and induced impacts, resulting in a total economic impact of \$6,950,016. The economic activity associated with the university's home baseball games supported 105 jobs. The three economic sectors that benefited the most from the baseball games were food services, accommodations, and colleges and universities. The results from this study highlight the valuable relationship universities have with their host communities.

Information provided by this study can be utilized in several ways by athletic departments, local businesses, and tourist destinations. For university athletic departments, this information can go a long way in supporting revenue-producing decisions, which research suggests is among the top issues facing athletic administrations (Goff, 2000). Among these solutions could be more targeted approaches to sponsorships in the form of game advertising and ticketing (Weight, Taylor, & Kuneen, 2010), clearer and more distinct marketing programs geared toward specific visitor groups (Busser, Benson, & Feinstein, 2002), and established importance of the university to the overall community (Toma 2003).

From a community tourism perspective, this type of information can be utilized by both local governments and destination marketing organizations. Supplying local governments with a better understanding of tourists' expenditures may provide support for promoting sport tourism as an economic development strategy (Wilton & Nickerson, 2006). Incorporating sport tourism into an area's overall economic development strategy could assist in increasing the diversity of the local economy.

Destination marketing organizations can collaborate with athletic administrators to package the sport events with other destination events or activities. Research indicates that scheduling community events and activities in conjunction with the sport event has the potential to increase the economic impact (Dixon, Hegreness, Arthur-Banning, & Wells, 2006). In addition, more strategized promotion of sport events (i.e., spring festivals, Homecoming weekends, spring football games, etc.) would further encourage more overnight visitors to the host communities, which will increase the economic benefits produced by the events (Chalip & Leyns, 2002). Encouraging communication between destination marketing organizations and athletic administrators could produce a relationship that benefits both parties (Gibson et al., 2003). Destination marketing organizations could promote the university's athletic events while the athletic department could promote other tourism related activities in the destination.

Analyzing the expenditure patterns of sport tourists at collegiate sport events also provides important information for commercial organizations to make better decisions in regards to their selected sport sponsorship objectives. In a study of corporate decision makers, Weight et al. (2010) suggest that there are clear and distinct objectives in determining whether or not to sponsor a university's athletics program. Additionally, these commercial organizations would not only focus on who to sponsor, but could also use this information to better determine proper marketing tactics such as coupons or specials.

Conclusion

This study investigated college baseball games which have not received much attention. Collegiate sport events, such as baseball, have the ability to provide significant economic

benefits to host communities. Research on sport tourists' expenditures and the economic impact of collegiate sport events provides information that athletic departments can use to demonstrate their importance to host communities. Destination marketing organizations and local businesses can also benefit from this type of information in development of marketing campaigns and the sponsorship selection process.

While results indicate sport tourists attending the university's home baseball games provide significant economic impacts for the host community, a few limitations should be mentioned. Participants in the research study were asked to recall their expenditures in various categories for a specific baseball game they attended. Stynes (1998) offers recommendations for collecting reliable tourist expenditure data which include: a specifically defined study area, detailed spending categories, specific unit of analysis (e.g., spending per day), and delineation between tourists and residents. Stynes (1998) also suggests gathering the expenditure data as close to the time of the actual behavior as possible in order to reduce recall bias. In the current study, research procedures strictly followed Stynes' (1998) recommendations. In addition, respondents were asked to report their expenditures two to six days after the actual behavior, potentially reducing recall bias.

Another limitation of the study is the number of games in which data was collected. Data were collected at five games during the season. These games were a good representation of a typical season of the university's home games. However, data could be collected at more games to enhance the information collected.

An additional limitation of the study is the failure to include costs associated with the event. Crompton (1995) suggest hallmark and mega-events typically have significant costs associated with infrastructure development. These costs are likely to offset any economic impact produced by these events. In comparison, college baseball games utilize existing infrastructure, require minimal investment of public money, and result in reasonable crowds and congestion.

Finally, the economic impact of college baseball games on host communities is probably limited to the top 15 teams in total home attendance reported by the NCAA. For an event to have an economic impact, a significant number of tourists must visit the area for the activity under investigation. After the top 15 teams in total home attendance, the attendance for home baseball games at the different universities begins to decrease dramatically. However, as college baseball's popularity continues to increase coupled with the increasing cost associated with attending professional baseball games, the potential for universities to attract a larger number of tourists to baseball games may increase, improving the possibility of generating an economic impact for the host community.

Future research on sport tourists' expenditure patterns and collegiate sport events is warranted. First, additional economic impact analyses should be conducted on different types of collegiate sport events to demonstrate the potential impact they have on host communities. Second, this research should be replicated on other college baseball programs inside and outside the top 15 in total home attendance to determine the impact these programs have on their host communities. Finally, future research focusing on sport tourists' expenditures should compare the spending patterns of sport tourists attending different types of sport events.

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