Study of Economic Impacts Derived from 2005 to 2009 Rural Texas Community Events and Factors that Predict Spending?[1]

Abstract

In this paper, we review the tourism impact from state supported events associated with Texas Rural Economic Development program and in the process of funding measure aspects of events that are found to be related to economic value. The economic values are the result of visitor spending and extrapolated to total event attendance creates economic value. Communities receiving funding were responsible for collecting visitor surveys to measure consumer spending as well as the community completing a survey to record descriptors of the event. The overall program results were that state support represented 14 percent of the total event investment and total event value from visitor spending created approximately $7.50 return for every $1 of state funding. However, this paper focuses on visitor spending and factors that contribute to economic impacts from those activities. The results indicate that there is a high positive correlation (Spearman Rho=.51) between miles traveled and visitor spending. Also found were significant low positive correlations for art events (r=.041) to higher spending while local heritage events had low negative correlations (r=-.038), which identifies lower spending. Visitors recognizing higher spending at events also visited surrounding communities and traveled over 60 miles to attend. Another target results was to measure the value of those traveling over 60 miles to attend, which resulted in recognized spending three-times above those traveling less than 60 miles ($129 versus $326 per person). In the area of advertising, web promotions were the only category related to higher spending values.

Hanagriff, Roger
Associate Professor of Agricultural Business
Texas A&M Kingsville
MSC 228
700 University Blvd.
Kingsville, Texas 78363
roger.hanagriff@tamuk.edu

Olga Murova
Assistant Professor
Dept. of Agricultural & Applied Economics
Texas Tech University
Phone: 806-742-2024,ext. 256
olga.murova@ttu.edu

Conrad Lyford
Associate Professor
Dept. of Agricultural & Applied Economics
Texas Tech University
Phone: 806-742-2024, ext. 236
conrad.lyford@ttu.edu

Selected Paper prepared for presentation at the Southern Agricultural Association Orlando, FL, February 6-9, 2010

REVIEW OF LITERATURE

According to Brown (2002) and Lewis (1998) rural tourism has become a popular destination for tourists. In addition, Lewis predicts that because of this renewed interest in America's rural communities; tourism in this area should continue to grow. According to the Travel Industry Association, nearly two-thirds of all adults in the nation, or 87 million individuals, have taken a trip to a rural destination within the past three years (Travel Industry Association of America, 2001). A potential reason for this increase in rural destinations could lie in the finding by Lewis which noted that approximately 96 percent of the U.S. population lives on four percent of U.S. land, which provides a great opportunity for tourist destinations to include rural areas

The previously mentioned increased flow of tourism to rural communities creates economic opportunity. This estimate is validated by Frederick, which reported that tourism has many potential benefits for rural areas (Fredrick, 1992). Additionally, Reeder & Brown (2005) affirm that tourism has the possibility of transforming a stagnant rural community into a flourishing one by attracting retirees, entrepreneurs, and young workers; diversifying the economy; and boosting the quality of life with a wider range of goods and services. Brown (2002) also states that tourism can be an important source of jobs for non-metro communities, especially for those that are economically underdeveloped. Findings by Dean Runyan Associates (2008) support Brown's statement. They found that during 2008, travel spending in Texas directly supported 544,000 jobs with earnings of $15 billion and that even though most travel spending and travel-generated impacts occur in the larger metropolitan areas in Texas, travel is essentially more important for many of the non-metro areas in the state.

Additionally, Weaver (1996) noted that as community leaders struggle to bolster their local economies they are searching for economic and employment alternatives. For example, Brown states that tourism can serve as an important source of tax revenues for local jurisdictions. This statement is supported by the finding by Dean Runyan Associates (2008) that travel spending generated $8 billion in local, state, and federal tax revenues. In addition, Brown notes that tourism can offer rural residents business opportunities in activities that cater to the tourist trade

and can additionally enhance local quality of life. A corresponding statement by Weaver notes that tourism can not only result in enhanced employment opportunities, increased income potential for local residents, diversification of the local economic base, and additional tax revenues for rural areas, but it can also raise community visibility, and add cultural opportunities for residents.

Additional findings by Brown state that frequently, effective rural tourism requires regional or State-level coordination since many rural areas, especially those that are more isolated or more sparsely populated, lack the resources required to establish a successful tourism program. Furthermore, Weaver (1991) argues that many non-metro communities' would also benefit from an expanded Federal role in rural tourism, as well as greater State involvement. Long and Nuckolls (1994) highlight the need for effective planning, and stress that technical assistance can prove crucial to tourism development success for many small communities with limited resource. The Texas Rural Economic Develop program of TDA are ideal examples of the research found by Weaver (1991) and Long and Nuckolls (1994).

Brown found that rural communities lack the name recognition associated with more populated areas and those different strategies can be pursued to achieve greater name recognition among potential visitors. However, communities sometimes lack assessment information for planning and communicating to stakeholders the value of events to the local community. In addition, Lewis states that rural communities should be given the opportunity to obtain the resources that will assist them in developing tourism, but without planning information, communities will lack long-term valuable decision tools.

COLLECTION OF DATA

Data captured from 2005 to 2009 Texas Rural Community program by using general event information and visitor surveys completed for each event. Communities required to complete visitor surveys to receive funding and completed an average of 221 per event from a total of 61 events. The complete data set created nearly 12,000 observations and analyzed using SPSS ver18.

GENERAL SUMMARY OF EVENTS

The data set contains nearly 12,000 data observations of visitors from 61 events, which averages 221 observation per event. These events were described by hosting communities to identify the one main focus of the event. Table 1.0 illustrates the numbers of visitor surveys in the sample by event type.

Table 1.0 Types of Events and Percent Representation in Sample

Event Type	Sample (n)	Percent of Sample
Local heritage event	6691	58.1
Agriculture event	941	8.2
Food/Wine festival	787	6.8
Art event	767	6.7
Folk festival event	649	5.6
Historical event	503	4.4
Musical Event	421	3.7
Other event	401	3.5
Nature tourism	338	2.9

As illustrated in Table 1, the local heritage type of event represented over half of the sample while other events are generally equal in sample size. These event designations were defined by communities in their application for state funding. However, all event categories are represented by adequate sample sizes to make inferences related to event type (Krejcie and Morgan, 1970).

Visitors responded to questions related to their previous experience in visiting the community, plans to visit surrounding communities, repeat visit to community and event, travel miles from the event, spending per person per day in the group and satisfaction rating while attending the event. These descriptive variables describe illustrate visitor perceptions and their experiences while attending the event. The economic value of the event is the result of visitor spending, which includes cost at the event, traveling, merchandise, meals and other expenses. Table 2 illustrates descriptive variables collected through visitor surveys for each event.

Table 2.0 Visitor Response Mean and Standard Deviation Values from 63 Events (n=11,519)

	M	SD
Sample Size (Visitor Numbers)	221.52	200.53
Attendance - Current Yr. (Attendance)	7,788.76	16,409.06
Have you ever been to this town prior (%)	82.10%	10.95%
Do you plan on visiting surrounding areas? (%)	65.16%	15.72%
Ever attended this event prior (%)	58.79%	22.16%
Plan on revisiting this community (%)	92.93%	15.38%
Would you come next year? (%)	93.32%	14.99%
Staying overnight at hotel? (%)	22.47%	15.33%
Staying in a nearby town? (%)	37.63%	20.07%
Total Expenditure ($)	$170.18	$112.22
Est. miles from event (Miles)	98.45	96.06
Rate your experience (1-10 Scale)	8.67	0.67

As illustrated in Table 2.0, sample size, event attendance, expenditure and miles traveled had high deviations of value, which identify these variables reporting wide ranges of results. A large numbers of these visitors reported previously visiting communities (82%), planning to revisit the community and the event (93%). Miles traveled averages over 60 miles, which is usually used as a descriptor for visitors staying in hotels and spending higher values while at the event. However, as previously stated miles traveled and spending differed among visitors.

As illustrated in Table 2, there are variables that deviate among visitors and may potentially be related to the type of event, type of visitor or other relationships. These relationships may be useful in community planning or estimating the impacts from events. The economic benefits of community events includes visitor spending and miles traveled. Specific relationships to those results may begin to define aspects of visitors that more directly creates economic benefit.

IMPACTS FROM RURAL COMMUNITY EVENTS

As previously mentioned, increasing event attendance brings more people to rural Texas communities with some planning to stay overnight at a local hotel or a nearby town. Total spending across the 63 events averages $170 per person, which represent events totaling over 400,000 in total event attendance. Considering this average spending and total event attendance,

visitors to these events represent spending of nearly $69 million (405,000 attendance * $107.18 spending) across all events and averages slightly over $1 million in event spending ($68.9M total spending / 63 events). These spending values may include spending in and out of the community, but represent state economic impacts derived from rural community activities.

Hotel spending is usually a key point for events and is sometimes related to visitor's distance traveled. Across all 63 events, 22.5% of visitors recognize staying in a local hotel. In relation to total sample size, these events likely created over 91,000 hotel room customers. One non-obtainable value was room nights, but many events were two day events, so estimating a normal one night stay and an average hotel rate of $76 (average state rate) across visitor responses totals to $172,000 in hotel room revenues. Considering the sample size for these events, an average visitor is estimated to spending $14.93 in expenses related to hotels. This appears to be minimal, but represents all visitors across all events. This value represents 8.9% of visitor spending related to hotel lodging, which is below the state average of nearly 16% (Dean Runyan and Associated, 2009). However a lower percent value, these events reported over 400,000 in total attendance, which represents over $6 million in total hotel spending (405,000 * $14.93).

As previously mentioned, event size and attendance varies among events, so a reported average per event in hotel revenue is likely not descriptive. These values of visitor spending do create the economic impact to a community that offers community events and variables associated with events may be related to these values.

RELATIONSHIPS TO ECONOMIC VALUES

As previously mentioned, visitor spending is the value of economic impact. Also previously mentioned was that visitors traveling over 60 miles potentially had higher spending values than those traveling less than 60 miles, which is predicting visitors are more likely to say in a hotel, bring less food and supplies with them, which makes them more dependent on local businesses to supply their needs. This hypothesis was tested using an Analysis of Variance, which is listed in Table 3.

Table 3.0 ANOVA for Visitor Miles Traveled and Spending ($\alpha = .05$)

	N	Mean	F	*P*
Yes visitor over 60 miles	3486	$325.69	101.5	0.0001
Visitor less than 60 miles	6613	$129.38		

As illustrated in Table 3, about one-third of the sample represents visitors traveling over 60 miles, but these visitors are spending 2.5 times the level of spending as more local visitors. Also, the ANOVA illustrates these values are significantly different with travelers recognizing over 60 miles in travel outspending other visitors.

A comparison of all event types and associated visitor spending may provide greater insight. Table 4 illustrates average miles traveled and visitor spending for each type of event.

Table 4.0 Average Visitor Spending and Miles Traveled per Event Type

Event Type	Average Spending (M)	Average Miles Traveled (M)
Folk Festival	$220.70	173
Local Heritage	$169.41	97
Historical	$313.77	172
Music	$95.85	39
Agriculture	$246.81	86
Nature Tourism	$256.51	108
Food/Wine Festival	$139.12	72
Art	$344.73	177
Other	$261.00	107

As illustrated in Table 4, visitor spending for local heritage and music, food/wine events are events with lower spending values than the previously reported average spending of $170 and also are events with travel distances less than the 98 mile average. The remaining events with higher spending and miles are listed in table 4. Art, Historical, Nature Tourism and Agriculture events are among the highest visitor spending events.

Since event spending and miles was found to be significantly different across types of events, a Pearson Correlation coefficient might provide additional insight into event relationships to

economic value. The event descriptive variables associated to visitor spending are listed in Table 5.

Table 5.0 Event Description Correlation Values Potentially Related to Visitor Spending ($\alpha = .01$ & $.05$)

Descriptive Event Factors	Pearson Correlation (r)	Correlation Relevance
Miles from event	.515**	High Positive
Attendance - Current Yr.	.046**	Low Positive
Folk Festival Event	0.005	None
Local Heritage Event	-.041**	Low Negative
Historical Event	0.008	None
Music Event	-0.008	None
Agriculture Event	.023*	Low Positive
Nature Tourism	0.011	None
Food/Wine Festival	-0.017	None
Art Event	.067**	Low Positive

*Note: ** represents significance at .01 while * represents significance at .05 levels*

As illustrated in Table 5, miles traveled has a high positive correlation to visitor spending and is the highest value to any other area. According to Davis, 1971 correlation values that are significant can be communicated in their perspective level of correlation. Other values were found to be correlated but had low values. These include greater attendance, agriculture type events and art events were positive correlated to spending, but did exhibit low correlation values. These values also were among the highest reported average spending valued for events, which does provides insight into these types of events increasing economic value.

One negative significant value to spending was local heritage events, but this value was a low negative correlation. This would identify that local heritage types of events have the potential to attract lower spending visitors versus other events, which was also measured in Table 4.

Visitor spending is the description of economic value and miles traveled seems to be much related to visitor spending, so both variables maybe important to consider. Table 1 thru 5 is illustrations of visitor impact related to types of events, but additional insight into spending may be also found by analyzing visitor information. Visitors completed information related to their previous experiences in the community or event or their plans to visit other local areas adjacent

to event location. Pearson correlations were developed to measure relationship for several visitor responses, which may provide insight into the value of visitors traveling greater distances to attend and spending higher values. These correlation values are listed in Table 6.

Table 6.0 Visitor Descriptive Factors Correlated to Miles Traveled and Spending (α = .01 & .05)

Descriptive Visitor Response Factors	(r) Miles Traveled	(r) Visitor Spending
Have you ever been to this town prior	-.068**	-0.014
Do you plan on visiting surrounding areas?	.034**	.057**
Ever attended this event prior	-.059**	0.009
Plan on revisiting this community	-.031**	-0.003
Would you come next year?	-.057**	-0.01
Staying overnight at hotel?	.109**	.098**
Staying in a nearby town?	0.01	0.009

*Note: ** represents significance at .01 while * represents significance at .05 levels*

As illustrated in Table 6, several descriptive visitor factors have low correlations to miles traveled and spending. Previous experience in attending an event and visiting the community and plans to revisit may be slightly negatively related to miles traveled, but no difference in visitor spending. Previous experiences in the community seem to identify people traveling less to an event, but not necessarily spending less.

Table 6 does illustrate that those with plans to visit surrounding areas and staying overnight in hotels had low positive correlations to miles traveled and spending. These results identify that visitor plans to extend their stay and visit other communities maybe the highest spending type of visitor.

SUMMARY AND CONCLUSIONS

Visitors attending events in rural Texas are estimated on average to travel over 98 miles and spend an average of $170 per visitor. The analysis in this paper measured the results of 63 events and represented nearly $69 million in spending value. This spending value represents local and state impacts and averages slightly over $1 million in average event value. On a general local level, these events created hotel revenues of over $6 million, which are significant local values.

Miles traveled seems to be the highest descriptor to visitor spending. Visitors that traveled over 60 miles to an event spent nearly three-times the amount of less traveled visitors. As events promote their event, targeting extend distance markets may be expensive but the return in spending for those visitors may be worth the investment. These visitors also have higher spending in hotels and again drive higher local economic values.

The type of event may also be related to event economic value. Local heritage types of events seem to attract a more local and less spending visitor and therefore have less potential for economic value. Music events and food/wine festivals also seem to be attracting less spending visitors, but less evidence exist for these events. However, these events may be less expensive to support and may offer high return on investments.

Higher event spending areas were found to be events such as art and agriculture events, which were correlated to higher spending visitors. Art events usually attract travelers from greater distances and spending is likely high as visitors purchase high dollar items while attending the event. Other events that had high average spending were historical and nature tourism events. These events all also had higher miles traveled, which again associate to higher spending and total value.

In relation to visitor's previous experience in attending events or visiting the community, no real relationship to improved spending was able to be found. Previous experience would seem to be related to visitors returning and then increasing their spending, but none was found. The only significant visitor experience value to spending was those visitors recognizing visiting

surrounding communities. Many community events are partnering with local communities to cross promote events, which meets this conclusion of these visitors increasing their spending and being valuable to the local economy.

Recommendations for this research paper include adding additionally captured data to increase the sample size. Additional variables to add are community cost to host an event so that a comparison of ROI can be assigned to determine the most profitable events. This paper on looked at visitor spending, but community cost may also be important to consider.

An additional recommendation is to redesign the visitor survey to specifically capture values related to spending per person and details of spending categories. Spending categories such as meals, entertainment, lodging, merchandise, entertainment and travel would be useful in measuring the economic value to the local community. Other elements in a redesigned survey include more demographics of visitors such as group size, ages and genders.

An additional recommendation is to take the current data set and develop a logit model to determine the strength of variables in relationship to economic value. This research found miles traveled to be a high value, but a model may provide additional insight.

REFERNCES

Baldwin, Fred. 1994. "Once Upon a Time, Happily Ever After," *Appalachia,* Vol. 27, No. 4, pp. 38-44.

Brown, Dennis M., & Reeder, Richard. 2005. "Rural Areas Benefit From Recreation and Tourism Development," *Amber Waves*, Vol. 3, No. 4, pp. 28-33.

Brown, Dennis M. 2002. Rural Tourism: An Annotated Bibliography. Report published on the Website of the Rural Information Center, National Agricultural Library, pp. 51. www.nal.usda.gov/ric/ricpubs/rural_tourism.html

Davis, J. A. (1971). *Elementary survey analysis.* Englewood, NJ: Prentice-Hall.

Dean Runyan Associates. 2005. Texas Tourism, Office of the Governor, Economic Development & Tourism. "The Economic Impact of Travel on Texas." Website: http://www.travel.state.tx.us/documents/full%20repor127780277281631250.pdf

Krejcie, R. and Morgan, D. (1970). Determining sample size for research activities. *Educational and Psychological Measurement, 30*. 607-610.

Lewis, James B. 1998. "The Development of Rural Tourism," *Park & Recreation*, Vol. 33, No. 9, pp. 99.

Long, Patrick T., & Nuckolls, Jonelle S. 1994. "Organizing Resources for Rural Tourism Development: The Importance of Leadership, Planning and Technical Assistance," *Tourism Recreation Research*, Vol. 19, No. 2, pp. 19-34.

Travel Industry Association of America. 2001. "Rural Tourism: Small Towns and Villages Appeal to U.S. Travelers." Website: http://www.tis.org/pressrec.asp?Item=111

Weaver, Glenn. 1996. "Community Tourism Development: An Opportunity for Park and Recreation Department," *Parks & Recreation*, Vol. 31, No. 9, pp 78.

Weaver, Glenn. 1991. "TTRA Annual Conference Focuses on Rural Tourism Development Issues," *Rural Development News*, Vol. 15, No. 1, pp. 8-9.

Weaver, Glenn. 1986. "Tourism Development: A Potential for Economic Growth," in New Dimensions in Rural Policy: *Building Upon Heritage*, Subcommittee on Agriculture and Transportation of the Joint Economic Committee, U.S. Congress, pp. 440-444.

Wilson, Suzanne, Fesenmaier, Daniel R., Fesenmaier, Julie & van Es, John C. 2001. "Factors for Success in Rural Tourism Development," *Journal of Travel Research*, Vol. 40, No. 2, pp. 132-138. Website: http://jtr.sagepub.com/cgi/content/abstract/40/2/132