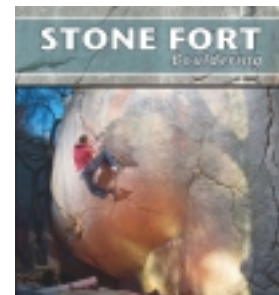


2015 RiverRocks Adventure Sport Games Report:

An Economic Impact Analysis of the
Stump Jump &
Triple Crown Stone Fort Climbing Competition



**University of Tennessee at Chattanooga
Tourism Center**

<http://www.utc.edu/health-human-performance/tourismcenter/>

Andrew W. Bailey, Ph.D.
Eric Hungenberg, Ph.D.

Executive Summary

- The October, 2015 RiverRocks Adventure Games included **9 events** attracting a total of **7601 participants** to the Chattanooga area.
- Non-residents comprised the vast majority of all available rosters: Stump Jump (83%), Stone Fort (72%), Head Race (81%), 7 Bridges Marathon (77%), and Lula Lake (80%), thus inducing unique economic impact on our region.
- Stump Jump participants spent an average of **\$348 per trip** and Stone Fort competitors spent an average of **\$190 per trip**.
- Accounting for total competitors and group size, the direct economic impact for Stump Jump was **\$167,212.50** and for Stone Fort, **\$171.779.02**
- Based on total participant numbers for all 9 events, the direct economic impact for the RiverRocks Adventure Games was **\$4,910,373**.

It should be noted that, even though the total impact is based on projections, that figure can be considered *very conservative*. The expenditures for adventure athletes to TN has been reported elsewhere at over \$440 per person (Shifflet, 2012)¹.

- Lacking a 10% response rate for several races, the researchers would prefer to err on the side of conservatism. Thus the total impact is based on the average per capita expenditure for Stump Jump and Stone Fort competitors (\$268.89).

Recommendations:

- The RiverRocks brand has widespread notoriety, but there is confusion about what the brand represents. This reduces buy-in from race directors and the community. A stronger identity would extend its reach, ultimately augmenting impact to Hamilton County.
- All events associated with RiverRocks are authentic to our region and highlight our wealth of resources. Most, however, are not accessible to spectators wishing to watch events, experience the atmosphere, and enjoy the natural surroundings. This lack of inclusion significantly reduces economic impacts due to a lack of visiting spectators, both in the present and in the future.
- More than ¾ of participants are from outside of Hamilton County. This is good from the perspective of economic impacts, but it doesn't represent America's Best Outdoor Town in the best light. RiverRocks could inspire outdoor activity within our own community if it included community-accessible events. RiverRocks is comprised of events tailored towards elite athletes, but this exclusivity may deter participation from less skilled and/or experienced athletes residing in the Chattanooga area.

¹ D.K. Shifflet & Associates, Ltd. (2012). *2012 Tennessee visitor profile* (pp. 1–75). Retrieved from

Project Overview

In collaboration with RootsRated, the University of Tennessee at Chattanooga presents a report illustrating the purchase behaviors of competitors competing in two RiverRocks events (Stump Jump 50k & Stone Fort Climbing Competition).

Within this report are details illustrating the direct, indirect, and induced impact of the aforementioned events on the economy of Hamilton County, Tennessee. The direct impact of the event will reflect the dollar value of economic activity that is made available for economic circulation as a direct result of spending made by non-local participants. The indirect impact figures are a product of spending made by local inter-related industries as a result of the event's existence. Lastly, induced effects are tallied by assessing the change in annual household spending derived from increased employee income created from an event.

It should be noted that this report does not account for the cost of hosting the Stump Jump for the local community and event directors (e.g., infrastructure upgrades, course/facility maintenance, staffing, etc.). Thus, the economic figures presented will be a conservative estimate of these events' economic impact.

Further, information comprised in the report demonstrates consumer habits of participants relating to length of stay, lodging accommodation preferences, and ancillary entertainment choices. The data illuminates consumer trends which may highlight potential cross marketing and/or business partnerships to be pursued by event managers in the future. Overall, the economic stimulus generated from these two events support the fact that small-scale sport events, like mega events, can have a tremendous economic impact on local communities.

Methods

In an effort to delineate each event's distinguishing characteristics, the report is divided into two sections: 1) Stump Jump Economic and Consumer Report, and 2) Stone Fort Climbing Competition Economic and Consumer Report. The data are a summation of useable survey responses collected from a sample of participants who were competing in the Stump Jump 50k race (N=53), as well as the Stone Fort Climbing Competition (N= 278).

When attempting to generalize findings from a sample to a collective population, two criteria must be determined:

- **The sample is comprised of participants which is representative of the greater population**
- **The sample is large enough to encapsulate at minimum, 10% of the population**

Impact was projected for those events which did not achieve a 10% survey response rate. To achieve overall impact, the average expenditures (\$268.89) and group size (3) for the Stump Jump and Stone Fort competitions were applied to actual numbers of non-resident participants for each event.

Stump Jump Report

Descriptives & Travel Information

The data indicate that a large majority of Stump Jump participants reside outside of Hamilton County, TN (83%). Participants of the race spent on average 1.5 nights in Chattanooga with the greatest percentage of athletes (53%) staying in hotel/motel properties. Among Chattanooga’s tourism attractions, athletes expressed the greatest interest in visiting downtown stores (45%), Lookout Mountain (14%), and other outdoor recreation sites (16%).

Table 1. Participant Breakdown

	Survey Respondent Frequencies	Actual Athlete Participation	Percentage of Local vs. Non Local Athletes
Local Athletes	4	54	17%
Non Local Athletes	49	273	83%
Total Athletes	53	327	100%

Table 2. Time Spent in Chattanooga or Surrounding Area

Avg. Number of Days	2.2
Avg. Number of Nights	1.6
Avg. Size of Travel Party	2.3

Table 3. Sites Visited while in Chattanooga

Location	Frequency	Percentage of Surveyed Visitors	# in Relation to Total Participants
Lookout Mountain	6	12%	33
Incline Railway	0	0	0
Discovery Museum	0	0	0
Historic Sites	3	6%	16
Outdoor Recreation Sites	7	14%	38
IMAX	0	0	0
High Point Climbing	2	4%	11
Lake Winnepesaukah	0	0	0
Downtown Stores	22	45%	123

Table 4. Lodging Breakdown

	Frequency	Percent
Hotel/Motel	23	53.5
Friend's House	7	16.3
Hostel	5	11.6
Home Rental	3	7
other	4	9.3
camping	1	2.3
Total	43	100

Stump Jump Report

Economic Impact Data

Expenditures

The data below illustrate the itemized List of Expenditures by Visiting Participants of the 2015 Stump Jump 50k race. To ascertain "Travel Party" expenditures, participants were asked how many individuals were traveling in their Party Group. Among participants, average party groups were comprised of 2.33 members. This figure was used for subsequent analyses.

While Direct Effects are an examination of visitor expenditures, Indirect and Induced Effects are also calculated to determine an event's Total Economic Impact Effect. This is due to an event's ability to generate residual spending, both among businesses impacted by an event, and from employees who may acquire a boost in discretionary funds. These impacts were estimated by using an input/output model generated by IMPLAN and can be seen in Table 5.

Table 5 . Itemized and Total Expenditures of Participants and Travel Party

Expenditure Category	Avg. Spent per Participant	Avg. Spent per Party	Total Per Category
Lodging (L)	\$146.51		\$39,997.23
Food (F)	\$86.02	\$200.43	\$54,717.39
Transportation (T)	\$42.56	\$99.16	\$27,070.68
Shopping (S)	\$42.28	\$98.51	\$26,893.23
Other (O)	\$30.625	\$71.36	\$19,481.28
Total Spent Per Party (TSPP) (F+T+S+O)		\$469.46	
Total Direct Impact		\$167,212.50	

Table 6. Economic Impact Summary

Impact Type	Employment	Labor Income	Total Value Added	Output
Direct Effect	2.0	54,842.5	86,509.6	116,719.1
Indirect Effect	0.2	10,686.2	17,413.3	29,358.5
Induced Effect	0.3	13,302.6	22,276.2	35,510.2
Total Effect	2.5	78,831.2	126,199.1	181,587.8

Table 7 estimates economic changes in employment, labor income, and total value added from tourism revenue. These values reflect the “ripple effects” the Stump Jump 50k race has on particular industries in Hamilton County. It should be noted that Total Employment reflects a multiplier value indicating that the creation of 1.0 new direct jobs as a result of the event will result in 1.0 jobs in the local economy. Based on the data below, expenditures related to the Stump Jump support the creation of over 2 jobs and contribute substantially to the local economy.

Table 7. Top 10 industries which received the greatest economic stimulus from the event

Description	Total Employment	Total Labor Income	Total Value Added**	Total Output*
Food services and drinking places	1.0	22,856.7	31,532.2	59,908.2
Hotels and motels, including casino hotels	0.4	9,824.2	24,658.4	41,308.9
Retail Stores - Gasoline stations	0.3	15,567.2	20,349.3	3,316.6
Retail Stores - Miscellaneous	0.2	4,817.1	7,028.9	9,166.2
Retail Stores - General merchandise	0.1	3,935.9	5,984.2	8,278.3
Services to buildings and dwellings	0.0	758.2	897.7	1,549.2
Employment services	0.0	776.3	835.6	1,017.9
Offices of physicians, dentists, and other health practitioners	0.0	1,715.3	1,738.6	2,590.4
Private hospitals	0.0	1,097.7	1,215.2	2,365.9
Real estate establishments	0.0	657.2	2,158.4	2,696.0

Note. *Output refers to the total economic value of the event in the local economy

**Value Added shows the total income that the event generates in the local economy.

Spending linking to non-local participants will also create economic benefits through local sales and property tax. Table 8 highlights revenue generated to the local government through these taxes.

Table 8 . Estimated Effects on Tax Revenue for Hamilton County

Description	Employee Compensation	Tax on Production and Imports	Households	Corporations
Dividends				\$7.00
Social Ins Tax- Employee Contribution	\$28.00			
Social Ins Tax- Employer Contribution	\$55.00			
Sales Tax		\$9,573.00		
Property Tax		\$4,170.00		
Motor Vehicle Lic		\$143.00		
Severance Tax		\$8.00		
Other Taxes		\$1,014.00		
S/L NonTaxes		\$101.00		
Corporate Profits Tax				\$233.00
Personal Tax: Income Tax			\$49.00	
Personal Tax: NonTaxes (Fines-Fees)			\$289.00	
Personal Tax: Motor Vehicle License			\$71.00	
Personal Tax: Property Taxes			\$19.00	
Personal Tax: Other Tax (Fish/Hunt)			\$30.00	
Total State and Local Tax	\$83.00	\$15,009.00	\$458.00	\$240.00

Stone Fort Climbing Competition

Descriptives & Travel Information

Table 9.

Demographics	
% Female	33.70%
Average Age	26.5
% Visitors	72%
# Children	0.5
Days of Travel	2.2
Nights	1.7
# in Party	3.9

- Triple Crown competitors were predominately male and younger than Stump Jump participants, thus also less educated and currently having less earning power.
- Over 30% visited downtown stores and restaurants, ¼ visited other recreation sites, 18% visited High Point climbing gym, and 15% visited the IMAX while in town.
- This highlights some potential partnerships for future event collaboration and sponsorships.

Table 10.

Education Level	# responses	% responses
Some HS	6	3.03%
HS Diploma	11	5.56%
Some College	66	33.33%
B.S.	66	33.33%
M.S.	20	10.10%
Ph.D.	6	3.03%

Table 11.

Income Level	# responses	% responses
<25,000	56	28.28%
25-35,000	22	11.11%
35-60,000	37	18.69%
60-100,000	26	13.13%
100-150,000	19	9.60%
150K +	11	5.56%

Table 12.

Attraction Visits	Percent Visiting
Downtown Stores	30.98%
Outdoor Rec Sites	25.00%
High Point Climbing	17.93%
Imax	14.67%
Aquarium	8.15%
Historic Sites	4.35%
Rock City	3.80%
Ruby Falls	0.54%
Incline Railway	0.54%
Discovery Museum	0.54%

Expenditures

Table 13. Expenditures by Category

Spending Category	Avg. Spending	Total Spending
Food	57.20	58156.47
Lodging	42.41	21925.19
Entertainment	18.50	18813.53
Shopping	20.15	20492.09
Transportation	40.53	41207.12
Misc.	11.00	11184.62
Total Direct Impact		\$171,119.02

Though per capita expenditures were less than for Stump Jump participants, climbers travelled in larger groups. Additionally, they make an average of 13.5 trips per year to the area, thus multiplying the effect of this one-time event. The expenditures for the Triple Crown support more than 2 jobs and add a significant amount of labor income to the local economy (Table 14). These effects have the most salient impacts on food, amusement, and retail, as show in Table 15.

Table 14. Direct, Indirect, and Induced impact.

ImpactType	Employment	Labor Income	Value Added	Output
Direct Effect	2.1	53,264.5	80,365.5.0	119,931.6
Indirect Effect	0.2	10,723.2	17,535.1	29,496.6
Induced Effect	0.3	12,839.7	21,499.0	34,357.5
Total Effect	2.6	76,827.4	119,399.6	183,785.7

Table 15. Top 10 Industries Impacted

Description	Employment	Labor Income	Value Added	Output
Food services and drinking places	1.0	24,550.6	33,868.9	64,518.6
Other amusement and recreation industries	0.4	10,443.7	15,878.4	6,548.8
Retail Stores - Miscellaneous	0.4	9,151.3	11,850.4	20,068.6
Retail Stores - General merchandise	0.2	5,503.7	13,814.1	23,385.2
Hotels and motels, including casino hotels	0.1	2,880.9	4,203.6	5,455.8
Retail Stores - Gasoline stations	0.1	2,805.4	3,667.2	4,979.9
Employment services	0.0	846.0	910.6	1,112.5
Services to buildings and dwellings	0.0	673.4	797.3	1,381.2
Real estate establishments	0.0	718.6	2,360.2	2,968.2
Wholesale trade businesses	0.0	1,660.0	1,682.5	2,530.7

Finally, the induced impacts of this event will continue to ripple through the economy for up to one year, impacting state and local taxes, as shown in Table 15.

Table 15. Annual Induced Effects

Description	Employee		Tax on Production	
	Compensation	and Imports	Households	Corporations
Dividends				\$6.00
Social Ins Tax- Employee Contribution	\$30.00			
Social Ins Tax- Employer Contribution	\$59.00			
Sales Tax		\$8,709.00		
Property Tax		\$3,794.00		
Motor Vehicle Lic		\$130.00		
Severance Tax		\$7.00		
Other Taxes		\$922.00		
S/L NonTaxes		\$92.00		
Corporate Profits Tax				\$208.00
Personal Tax: Income Tax			\$46.00	
Personal Tax: NonTaxes (Fines- Fees			\$276.00	
Personal Tax: Motor Vehicle License			\$67.00	
Personal Tax: Property Taxes			\$19.00	
Personal Tax: Other Tax (Fish/Hunt)			\$29.00	
Total State and Local Tax	\$89.00	\$13,655.00	\$437.00	\$215.00

About the authors:

Andrew W. Bailey, Ph.D. is Assistant Professor of Outdoor Recreation and Tourism at the University of Tennessee at Chattanooga. His research focuses on adventure and natural resource-based recreation and tourism. Founder of the UTC Tourism Center, he aspires to provide community-driven data to support the regional outdoor and tourism industries, while enhancing quality of life for local residents.

Eric Hungenberg, Ph.D. is an Assistant Professor of Sport and Leisure Science Administration at the University of Tennessee at Chattanooga. His background working as a practitioner in sport involved overseeing and marketing destination sport events. His research agenda is geared towards understanding sport commitment, and examining the relationship between a consumer's emotional connection to location and sport-related consumption.