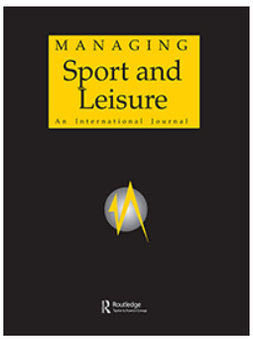

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Measuring the economic impact of a state park system

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A low cost approach to estimating the economic impact on local communities of a comprehensive state park system is described. The expenditures of 51,603 visitors at 29 parks were collected, extrapolated to an additional 60 parks, and used as inputs to derive estimates of economic impact on the parks' local areas using four measures: labor income, value added, output and jobs. The potential of those kinds of analyses for positively influencing elected officials' budget decisions for parks is illustrated.

Keywords: economic impact, parks, political advocacy

INTRODUCTION

It has been observed that in the political arena, it is almost always advantageous to frame an issue in economic terms when seeking support from a legislative body (Harnik & Crompton, 2014). This is especially important in the context of parks which sometimes are referred to as "invisible assets" (Commission for Architecture and the Built Environment [CABE], 2009). Parks typically have difficulty in securing legislative support in the budget process, because they are (i) rarely prominent as issues in political campaigns; (ii) heavily subsidized, even in cases where a charge is made; and (iii) costs are easily visible while their economic value is not.

There are multiple ways in which parks strengthen a community's economic base (Crompton, 2007; Harnik & Crompton, 2014), but the most prominent and visible among them, especially for regional and national parks, is probably their economic impact on local communities.

The study reported here illustrates a low cost approach to obtaining a reasonable estimate of the economic impact on local communities of the 89 parks that comprise the Texas state park system. The study cost was $25,000 (£15,000). By way of comparison, many would consider this to be a reasonable cost expectation for consultants to perform an economic impact study at a *single* park. The study's objective was to estimate the economic impact of visitors to each of the state parks on the counties in which those parks are located.

The study was commissioned by an alliance of conservation and park organizations and advocates who were concerned that the Texas Park and Wildlife Department (TPWD) had been underfunded for many years. It was an integral part of an effort to lobby the Texas legislature to substantially increase the agency's parks budget.

These advocacy groups believed the dominant position, or place in the mind, that state parks occupied among officials

and most state legislators, was that state parks were a relatively discretionary, nonessential service which was nice to have, but in difficult economic times there were more important essential services that needed to be protected first. The intent of the study was to reposition state parks so they would be perceived as positive contributors to the State's economy rather than as a welfare service requiring subsidy.

The study focused on developing data that would provide a foundation for the repositioning effort. The challenge was to position state parks as economic engines in their host communities. The intent was to align them with other major businesses in a local community such as a manufacturing plant. If a plant retrenches its labor force or closes, it is liable to have a major negative impact on its host community. Many Texas state parks are located in rural areas which are especially vulnerable to job losses and it seems likely that the negative impact on an area's economy of budget cuts for parks would be similar to those imposed at a manufacturing plant. The expenditures in the area by visitors (who by definition are tourists) who come to those parks and the funds the parks receive from the state capital in Austin represent injections of new money that is important in many rural economies.

Visitors' initial expenditures stimulate subsequent economic activity. There is a ripple effect through the community as the businesses which receive their expenditures in turn use some of them to purchase supplies and pay employees; and this process is repeated many times over. Hence, this "multiplier effect" creates additional business turnover, personal income, employment, and government revenue.

The conceptual underpinning of visitors' economic impact is shown in Figure 1 (Crompton, 2006). It shows that residents and visitors in a community give funds to the state government in the form of taxes. The state uses a proportion of these funds to subsidize park facilities and programs

Fig. 1. The Conceptual Rationale for Undertaking Economic Impact Studies

that attract out-of-town visitors who spend money in the local community. This new money from outside the community creates income and jobs for residents. Community residents, aided by visitors' bed and sales taxes, are responsible for providing the initial funds, and residents receive a return on their investment in the form of new jobs and more household income.

METHOD

The study estimated the economic impact of Texas state parks on the counties in which they are located. Data were collected by surveying at 29 parks. These results were then used as the basis for developing expenditure estimates at each of the other 60 facilities in the Texas state parks system. The economic impact of visitor spending is estimated by the following formula:

Number of visitor days × average spending per visitor day × multiplier

Experience in previous studies showed that visitors to state parks had no awareness of county boundaries. Hence, visitors were defined as those survey respondents who reported they resided outside a 20 mile radius of the park they were visiting.[1]

Since some visitors may have had other reasons for being in an area in addition to visiting the state park, they were asked to respond to the following question:

Circle the number below that best represents the extent to which visiting the park was the primary purpose of your trip to this area. A 0 indicates the park had no influence and you would have come to the area anyway, while a 10 indicates that the park is your only reason for visiting the area on this trip.

0 1 2 3 4 5 6 7 8 9 10

↑ ↑ ↑

None : I would have come to the area anyway — *Half of my reason for coming to the area* — *My only reason for coming to the area*

If they responded with anything other than 10 on this scale, then their spending was discounted accordingly to reflect the proportion of it that was attributable to the park. For example, if a respondent reported the park had "0" influence on the decision to visit the area, then the expenditure would be 0. If the reported score was 6, then 60% of the spending in the area was attributed to the park.

Reasonably accurate estimates of visitor expenditures are dependent on accurate counts of visitors, since the estimates are derived by extrapolating from a sample to a total visitation count. A decade ago, TPWD invested considerable effort and resources in developing procedures tailored specifically to each park that yielded accurate visitation numbers (Kaczynski, Crompton, & Emerson, 2003). Since that time, they have been periodically reviewed and refined. As a result of those efforts, TPWD has become a model on this issue for other park systems in the USA and can reasonably claim that its numbers are among the most accurate among regional, state, and national park systems in the country.

TPWD's procedures count "visitor days". Thus, if a party of 3 people is in a park for a part or all of 4 days, then it is recorded as 12 visitor days. The system reports separate counts for day visitors and for those who stayed at camp sites in the parks overnight.

Data were collected at 29 state parks between 11 March and 27 July 2014. The number of completed and useable surveys from each park is shown in Table 1. A total of 13,647 individuals were interviewed on site. Since each of these respondents was

Table 1. Profile of Summaries Completed at Each Park

		Total surveys completed			Missing	Usable surveys								
							Local	Non-local						
									Day visitors			Overnight visitors		
Park name	County	Number of visitor groups	Number of visitors	Average group size	Number of visitor groups with missing data	Number of usable visitor groups	Number of local visitor groups	Number of non-local visitor groups	Number of visitor groups	Number of visitors	Average group size	Number of visitor groups	Number of visitors	Average group size
Balmorhea	Reeves	119	344	2.9	9	110	1	109	19	70	3.7	90	256	2.8
Big Bend Ranch	Presidio & Brewster	230	723	3.1	32	198	4	194	41	104	2.5	153	491	3.2
Brazos Bend	Fort Bend	459	1683	3.7	42	417	99	318	194	593	3.1	124	508	4.1
Caprock Canyons	Briscoe	279	784	2.8	17	262	1	261	102	305	3.0	159	441	2.8
Choke Canyon	Live Oak	359	1056	2.9	102	257	18	239	125	333	2.7	114	357	3.1
Daingerfield	Morris	514	2204	4.3	35	479	89	390	130	697	5.4	260	1055	4.1
Davis Mts./ Indian Lodge	Jeff Davis	496	1411	2.8	117	379	1	378	84	218	2.6	294	837	2.8
Dinosaur Valley	Somervell	531	1759	3.3	13	518	2	516	433	1425	3.3	83	293	3.5
Eisenhower	Grayson	573	2580	4.5	44	529	68	461	71	355	5.0	390	1768	4.5
Enchanted Rock	Gillespie & Llano	1335	5718	4.3	109	1226	16	1210	967	3245	3.4	243	1755	7.3
Fort Richardson	Jack	425	1539	3.6	12	413	8	405	30	85	2.8	375	1394	3.7
Galveston Island	Galveston	322	1147	3.6	28	294	16	278	129	443	3.4	149	555	3.7
Garner	Uvalde	1511	7343	4.9	189	1322	10	1312	200	950	4.8	1112	5357	4.8
Goliad	Goliad	475	1651	3.5	16	459	7	452	310	1093	3.5	142	468	3.3
Hueco Tanks	El Paso	333	1029	3.1	21	312	149	163	112	358	3.2	51	119	2.3
Inks Lake	Burnet	454	1856	4.1	107	347	18	329	46	175	3.8	283	1266	4.5
Lake Bob Sandlin	Titus	269	1273	4.7	7	262	21	241	39	157	4.0	202	1003	5.0

(*Continued*)

Table 1. Continued

		Total surveys completed			Missing	Usable surveys								
							Local	Non-local						
									Day visitors			Overnight visitors		
Park name	County	Number of visitor groups	Number of visitors	Average group size	Number of visitor groups with missing data	Number of usable visitor groups	Number of local visitor groups	Number of non-local visitor groups	Number of visitor groups	Number of visitors	Average group size	Number of visitor groups	Number of visitors	Average group size
Lake Corpus Christi	San Patricio	493	2191	4.4	59	434	36	398	82	361	4.4	316	1401	4.4
Lake Livingston	Polk	125	616	4.9	8	117	7	110	13	29	2.2	97	501	5.2
Lake Mineral Wells	Parker	503	1633	3.2	61	442	90	352	83	248	3.0	269	929	3.5
Lake Ray Roberts	Cooke & Denton	851	2921	3.4	92	759	250	509	227	564	2.5	282	1175	4.2
Lake Somerville	Burleson & Lee	363	1107	3.0	26	337	26	311	95	216	2.3	216	758	3.5
LBJ	Gillespie	418	1425	3.4	75	343	2	341	341	1132	3.3	N/A	N/A	N/A
Martin Dies	Jasper	284	1096	3.9	19	265	7	258	8	54	6.8	250	945	3.8
Palo Duro Canyon	Armstrong & Randall	449	1222	2.7	25	424	78	346	202	545	2.7	144	403	2.8
Pedernales Falls	Blanco	538	1898	3.5	32	506	2	504	135	382	2.8	369	1329	3.6
Seminole Canyon	Val Verde	271	844	3.1	17	254	11	243	81	217	2.7	162	474	2.9
Tyler	Smith	607	2182	3.6	37	570	115	455	123	441	3.6	332	1098	3.3
WOB	Washington	61	368	6.0	12	49	2	47	47	291	6.2	N/A	N/A	N/A
Total		13,647	51,603	3.8	1363	12,284	1154	11,130	4469	15,086	3.4	6661	26,936	4.0

asked to report the expenditures of all members in his/her "immediate group", the survey data represent the expenditures of 51,603 visitors.

These 29 parks were selected because they had either a park host who resided in the park, or members of Friends of the Park group who volunteered to administer the survey instrument. Surveys were administered to convenience samples of visitors not probability samples (i.e. not random, stratified, or cluster samples), so their representativeness is not known. However, previous studies of Texas state park visitors have suggested that they are relatively homogeneous in terms of their interests and behaviors (Crompton & Tian-Cole, 2001). If they are homogeneous, then the imperative to use probability samples diminishes. To test for homogeneity, the samples of both day and overnight visitors at each of the nine parks in which most responses were collected (Daingerfield, Dinosaur Valley, Enchanted Rock, Garner, Goliad, Lake Corpus Christi, Lake Ray Roberts, Pedernales Falls, and Tyler) were split into halves and thirds based on the date of collection. Statistical tests (ANOVAs) were undertaken on the per person per day averages and they found significant differences in either the bisection or trisection splits in only 3 of the 18 samples (17%). Thus, it is reasonable to assume that in 83% of the cases visitors were relatively homogeneous in their expenditures and the convenience samples are reasonably representative.

From past experience, the study team found that the accuracy of estimates is improved if extreme "outlying" values in the samples are removed. When estimates derived from relatively small samples are extrapolated to relatively large populations, sampling "accidents" can lead to substantial misrepresentation. By the luck of the draw, a grossly unrepresentative case that is not consistent with typical spending behavior of state park visitors can be included in a sample. To avoid this misrepresentation, the highest 1% and the lowest 1% of group per person per day values were removed from each sample.

AVERAGE SPENDING PER VISITOR DAY AT THE 29 SURVEYED PARKS

A fundamental principle of economic impact is that it is concerned only with new money entering into a community from outside its boundaries. Thus, at each park, expenditures by those visitors residing *within* the host county were excluded from the analysis. All those surveyed were asked their zip code and local residents were identified by this means.

Per person per day estimates at each park were made by dividing the expenditures reported by each group by the group's number of visitor days. For example, if a group was composed of three people who spent a total of $135 outside the park and they were in the park for three days, then the group's per person per day expenditure was $135/9, that is, $15 per person per day. Although data collection was limited to the March through July period, there was no reason to suspect that visitors' expenditure patterns would be different from those in other months of the year. Hence, the average values for each sample were calculated and extrapolated to the annual visitation numbers for the park.

Past experiences of the study team have shown that day and overnight visitors are likely to have different expenditure patterns. Invariably, the per person per day expenditures outside the park of overnight visitors are lower than those of day visitors. This is because overnight visitor groups remain in the parks for a longer period of time, which translates into more visitor days and economies of scale since expenditures are spread across more days. For this reason,

expenditure values for each of the two groups were calculated separately. TPWD reports annual numbers of day visits and overnight visits separately for each park, so the samples' values were extrapolated to their respective annual visit categories.

The first two expenditure items in the survey questionnaire requested visitors' spending on park admission and overnight accommodations in the park. These amounts were excluded from the per person per day estimates, because these dollars were passed through to TPWD headquarters in Austin and did not enter the local economy. In lieu of these resources remaining in the parks, TPWD sent funds to each park for personnel, operating, and capital renovation expenses. This was new money into the local economy. Hence, it was included in the economic impact analysis.

EXTENDING THE ESTIMATES TO THE 60 STATE PARKS AT WHICH DATA WERE NOT COLLECTED

Data collected at the 29 parks were used to develop expenditure estimates of visitor spending at each of the other 60 facilities in the Texas state park system. A two-stage process was used to do this.

The first stage was to develop the matrix shown in Table 2. Two criteria were used to define the matrix. The median number of day visits among the 29 parks was 69,000, while the median proportion of local visitors to them was 10.5%. These median values defined the matrix and each of the 29 parks was assigned to one of the four cells. It was assumed that all overnight visitors were likely to be from beyond the 20 mile radius. The average per person per day among both

Table 2. Classification of 29 Parks by Ratio of Local/Non-local Visits and Number of Day Visit

		Number of day visitors <69,000	**Number of day visitors >69,000**
Local ratio of day visitors <10.5%	Park name	Big Bend Ranch Complex Caprock Canyon Choke Canyon Davis Mountains/Indian Lodge Goliad Seminole Canyon	Balmorhea Dinosaur Valley Enchanted Rock Garner Inks Lake Pedernales Falls Ray Roberts complex Washington on the Brazos
	Average of per person per day expenditure	Day visitors : $23.40 Overnight visitors : $15.39	Day visitors : $28.03 Overnight visitors : $12.63
Local ratio of day visitors >10.5%	Park name	Daingerfield Eisenhower State Park Fort Richardson Hueco Tanks Lake Bob Sandlin Lake Livingston Lake Mineral Wells Martin Dies, Jr.	Brazos Bend Galveston Island Lake Corpus Christi Lake Somerville Lyndon B. Johnson Palo Duro Canyon Tyler
	Average of per person per day expenditure	Day visitors : $16.22 Overnight visitors : $11.88	Day visitors : $35.80 Overnight visitors : $15.74

day and overnight visitors across the parks in each cell was calculated. The rationale for using these two criteria was that the number of day visits was a surrogate for a park's perceived quality or attraction power, while the proportion of local/non-local visitors was a surrogate for proximity to urban population centers. The research team believed that both these variables were likely to influence the amounts of visitors' expenditures.

The second stage was to assign the 60 parks at which no surveying was done to one of the four cells in Table 3. The number of day visits at each park was provided by TPWD. The superintendents of each park were asked to estimate the proportion of day visits attributable to non-locals from beyond the 20 mile radius based on their experience.

TPWD numbers showed that a large majority of these parks had fewer than 69,000 annual day visits (Table 3), and the park superintendents estimated that a large majority of them attracted more than 10.5% of their visitation from the local area. The per person per day estimates used for these 60 parks were the cell averages derived in Table 2. For example, at Caddo Lake the average expenditures used were \$16.22 and \$11.88 for day and overnight visits, respectively; while at McKinney Falls \$35.80 and \$15.74 were adopted.

FIVE MEASURES OF ECONOMIC IMPACT

For each park, five economic impact measures were calculated: direct expenditures, labor income, value added, sales, and number of jobs created. The *direct expenditure* data were collected in the visitor surveys from each visitor group. After "the purpose of the trip" discount that was described earlier had been applied, the direct expenditures for day and overnight groups were totaled and extrapolated from the sample to the official day visit and overnight visit attendance at each park. Thus, the total direct expenditures estimated the amount spent in the local economy by all non-local visitors to the park for a year.

The total direct expenditure data were then used as inputs to the IMPLAN input–output model for the county of interest to derive estimates of (i) labor income, (ii) value added, (iii) output, and (iv) jobs. There is frequently confusion and misunderstanding in interpreting these alternate measures of economic impact. The *output measure* includes all sales in the service sector, *but* for the wholesale and retail sectors it includes only gross margin, not gross sales. It is calculated as the selling price of an item, less the cost of goods sold (essentially production or acquisition costs). If, for example, a visitor to a park purchased a camera from a store while on a trip for \$100 and the retailer purchased it from a wholesaler for \$60, then the output measure would include only the \$40 retailer's markup on the camera. It has become commonplace for tourism and economic development agencies to report economic impact in terms of gross sales generated, not gross margin. This is unfortunate because clearly the wholesale costs immediately leak out of the economy.

The most meaningful economic impact indicators are those which measure *value added* to the community and a park's contributions to the *labor income* of residents in a jurisdiction. *Value added* is the value of output less the value of intermediate consumption. That is, the difference between value of goods and cost of materials or supplies purchased from business in other sectors that are used in producing them. It estimates the value added to the county's gross regional product. This measure eliminates the duplication inherent in the sales and output measures, which results from the use of products of some businesses as materials or services by others.

Thus, in the case of the camera example used to illustrate the output definition in the previous section, the \$40 retailer markup margin represented in the output measure

Table 3. Classification of 60 Parks by Ratio of Local/Non-local Visits and Number of Day Visit

		Number of day visitors <69,000	**Number of day visitors >69,000**
Local ratio of day visitors <10.5%	Park name	Caprock Canyons & Trailways Colorado Bend Devil's River Devil's Sinkhole Fort Leaton Kickapoo Cavern Lake Tawakoni Lost Maples Old Tunnel Possum Kingdom	
	Estimated per person per day expenditure	Day visitors: $23.40 Overnight visitors: $15.39	Day visitors: $28.03 Overnight visitors: $12.63
Local ratio of day visitors >10.5%	Park name	Abilene Atlanta Blanco Bonham Buescher Caddo Lake Cleburne Cooper Lake Copper Breaks Fairfield Lake Falcon Fort Boggy Fort Parker Franklin Mountains Goose Island Government Canyon Hill Country Lake Arrowhead Lake Brownwood Lake Colorado City Lake Whitney Lockhart Martin Creek Lake Meridian Mission Tejas Monahans Sandhills Monument Hill/Kreische Brewery Mother Neff Palmetto Purtis Creek San Angelo SP San Jacinto Battleground and Monument Sea Rim Sheldon Lake South Llano River SP Stephen F. Austin Village Creek WBC/Bentsen-Rio Grande	Bastrop Battleship Texas Big Spring Cedar Hill Guadalupe River/Honey Creek Huntsville Lake Casa Blanca McKinney Falls Mustang Island

(*Continued*)

Table 3. Continued

	Number of day visitors <69,000	Number of day visitors >69,000
	WBC/Estero Llano Grande WBC/Resaca de la Palma Wyler Tramway	
Estimated per person per day expenditure	Day visitors: $16.22 Overnight visitors: $11.88	Day visitors: $35.80 Overnight visitors: $15.74

presumably included costs associated with operating a retail store such as packaging; fuel, gas, and electricity supply; rent; transportation; insurance; and repair and maintenance. While value-added is part of the output measure, the output includes these other costs whereas they are omitted in the value-added measure because they are duplicated, appearing in other sectors of the economy.

The conceptual rationale for measuring economic impact is to compare how much money a community's residents invest in a tourism project with how much income they receive from it (Figure 1). Thus, the *labor income measure* should be the primary indicator of interest to policy-makers. It reports the effect of an extra unit of visitor spending on the changes that result in levels of personal income in the host community. That is, the income per dollar of direct sales that accrues to residents. It includes both employee compensation and payroll benefits, and proprietor income. Unfortunately, because it generates a much lower number than the gross sales, output, and value-added measures, it is frequently omitted in reports done by consultants or advocates who are seeking large numbers to legitimize their position.

The common use of the inappropriate gross sales and output measures creates an ethical dilemma for those who seek to present meaningful conclusions of economic impact studies. If they do not present these measures, then a park's impact is likely to appear relatively insignificant when it is compared to the results from other public investments which do not highlight them. A solution to this conundrum is to focus the report on value-added and labor income measures. The sales and output measures may also be reported for the purpose of comparison, but their inappropriateness should be emphasized. The use of a gross sales measure is so egregiously misrepresentative that it was not included in the study, but the reasons for omitting it were stated so legislators were aware of its inappropriateness. The output measure was provided, but policy-makers were urged to focus on the value-added and personal income measures.

The *jobs measure* of economic impact does not distinguish between full-time and part-time jobs, and neither the proportion of full- or part-time jobs is identified, nor the number of hours worked. However, the probability of full-time staff jobs being created is much higher if the impact being measured is based on revenues from facilities, like Texas state parks, that have a reasonably consistent flow of visitors for long periods of the year. A consistent flow makes it more economically feasible for local businesses to hire full-time staff to accommodate the demand.

CALCULATING ECONOMIC IMPACTS

The estimates of economic impact required two basic elements: (i) economic structure

of the host county in which the park was located and (ii) visitor expenditures. The economic structure of the county, as well as the multipliers utilized, were obtained by using the IMPLAN software, which creates separate models of the economic structure of each county in Texas or, in some instances, a model for two counties if park boundaries crossed county lines.

The IMPLAN acronym is derived from IMpact analysis for PLANning. It is an input–output modeling system, developed originally by federal agencies over 20 years ago, but now privately owned, that builds its accounts with secondary data collected from a multitude of federal government agencies. It is widely accepted in the economic community and used extensively by economic development agencies in the USA.

Revenues by visitors spent inside the park were *not* included in the economic impact calculations because they did not enter the local economy. All such revenues were forwarded directly to TPWD's Austin headquarters.

The following steps were used to compute the economic impact of visitors to each park. Enchanted Rock State Park is used as an example (Table 4); the same format was used for all 89 state parks.

Stage 1	1335 individuals were interviewed at Enchanted Rock State Park. However, 109 of the questionnaires were incomplete and not usable; 16 of the remaining 1226 respondents resided in Gillespie or Llano Counties. Thus, 1210 respondents came from outside the local counties. Of these 967 were day visitor groups, while 243 were overnight visitors (Table 1)
Stage 2	The average per person, per day expenditures reported by the day visitor and overnight visitor groups were calculated. If their response to the 10 point question asking the extent to which visiting the park was the primary purpose of their trip to the area was less than 10, then their per person expenditures were discounted accordingly. The highest 1% and the lowest 1% of per person per day values were removed from each visitor group. After these outliers were excluded, 947 day visitor groups and 239 overnight visitor groups were analyzed. This process revealed that the average per person per day expenditure of day and overnight visitors at Enchanted Rock were $26.97 and $6.37, respectively
Stage 3	The per person, per day amounts were multiplied by 225,208 and 22,121 to estimate total direct expenditures for each of the either expenditure items by out of county day and overnight visits, respectively
Stages 4, 5, 6, 7 and 8	The total direct expenditures in each of the eight expenditure categories were entered into the IMPLAN software to calculate the impact on Gillespie and Llano Counties of these direct expenditures on labor income (Stage 4), value added (Stage 5), output (Stage 6), jobs (Stage 7), and sales tax (Stage 8)
Stage 9	In addition to expenditures by visitors, the operating budget provided by TPWD for the park constitutes an economic impact on the two counties, because these are new dollars coming into the county from Austin. The FY 2014 budget allocation for Enchanted Rock State Park of $577,775 is shown in Stage 9
Stage 10	Finally, at the foot of each of the 89 park economic impact studies, the total economic impact on labor income, value added, output, and jobs created is reported. An estimate of the sales tax accruing to the county from expenditures associated with the park is included

Table 4. The Economic Impact of Enchanted Rock State Park on Gillespie County and Llano County

Day visitors' average party size	3.4
Overnight visitors' average party size	7.3

Stage 1

Total *day visitor* days fy2014	237,061
Total *overnight visitor* days fy2014	22,121
Estimated non-local *day visitor days*	225,208
Estimated non-local *overnight visitor days*	22,121

Stage 2
Per person per day expenditures of non-local visitors within county

Items	Day visitors	Overnight visitors
Groceries	$1.84	$1.61
Food & beverage	$7.81	$1.14
Recreational equipment	$0.76	$0.73
Retail shopping	$3.22	$0.38
Gas and oil	$6.13	$1.67
Private auto expenses	$0.26	$0.08
Lodging expenses	$6.50	$0.56
Other expenses	$0.47	$0.20
Total	$26.97	$6.37

Stage 3
Annual expenditures of non-local vistors within county

Items	Day visitors	Overnight visitors
Groceries	$414,383	$35,615
Food and beverage	$1,758,874	$25,218
Recreational equipment	$171,158	$16,148
Retail shopping	$725,170	$8,406
Gas and oil	$1,380,525	$36,942
Private auto expenses	$58,554	$1,770
Lodging expenses	$1,463,852	$12,388
Other expenses	$105,848	$4,424
Total	$6,073,860	$140,911

Economic impacts of non-local *day visitors* and *overnight visitors* within county

	Items	Stage 4 Labor income	Stage 5 Value added	Stage 6 Output	Stage 7 Job	Stage 8 Sales tax
Expenditure of non-local day visitors	Groceries	$72,130	$110,442	$161,903	2.4	$9,195
	Food and beverage	$792,422	$1,330,887	$2,344,032	35.5	$82,523
	Recreational equipment	$26,676	$60,814	$88,706	1.9	$6,469
	Retail shopping	$157,081	$311,315	$419,185	8.5	$18,048
	Gas and oil	$72,435	$135,252	$204,281	3.1	$12,060
	Private auto expenses	$38,877	$48,816	$80,204	1.0	$2,494
	Lodging expenses	$401,786	$1,029,698	$1,980,289	19.8	$81,870
	Other expenses	$16,615	$29,327	$38,308	0.6	$2,176
	Total	$1,578,022	$3,056,551	$5,316,908	72.8	$214,835

(*Continued*)

Table 4. Continued

Expenditure of non-local overnight visitors	Groceries	$6,199	$9,492	$13,915	0.2	$790
	Food and beverage	$11,361	$19,082	$33,608	0.5	$1,183
	Recreational equipment	$2,517	$5,738	$8,369	0.2	$610
	Retail shopping	$157,081	$311,315	$419,185	8.5	$18,048
	Gas and oil	$1,938	$3,619	$5,466	0.1	$323
	Private auto expenses	$1,175	$1,476	$2,424	0.0	$75
	Lodging expenses	$3,400	$8,714	$16,758	0.2	$693
	Other expenses	$694	$1,226	$1,601	0.0	$91
	Total	$184,365	$360,662	$501,326	9.7	$21,813

Stage 9
Economic impacts of a park budget spending within county

	Items	Labor income	Value added	Output	Job	Sales tax
Park budget	Total ($577,755)	$232,696	$460,378	$761,151	6.3	$7,597

Stage 10
Summary of state park's impacts on county

	Items	Labor income	Value added	Output	Job	Sales tax
Grand total	Enchanted rock state park	$1,995,083	$3,877,591	$6,579,385	88.8	$244,245

Table 5. Summary of Findings for 29 State Parks (Fiscal Year 2014)

State parks	Park revenues	Total park budget	State operating surplus/ loss	Non-local day visitor days	Non-local overnight visitor days	Annual expenditures of non-local day visitors	Annual expenditures of non-local overnight visitors	Impact on labor income	Impact on value added	Impact on output	Number of jobs created	Sales tax	Cost per job	Leverage of state dollars to labor income
Balmorhea	$807,981	$613,821	$194,160	82,186	34,684	$3,682,168	$595,325	$1,095,369	$2,304,520	$3,988,011	50.3	$150,273	–	–
Big Bend Ranch Complex	$347,970	$1,569,632	($1,221,662)	13,803	7595	$762,328	$172,875	$1,051,733	$1,915,780	$3,056,988	26.9	$58,517	$45,415	1:0.86
Brazos Bend	$1,535,411	$1,138,509	$396,902	107,155	55,124	$2,262,000	$1,135,878	$1,068,865	$2,224,109	$3,575,795	47.7	$111,108	–	–
Caprock Canyons	$205,002	$579,151	($374,149)	36,727	35,835	$519,448	$381,092	$298,128	$588,796	$1,199,387	14.1	$27,894	$26,535	1:0.80
Choke Canyon	$545,557	$842,516	($296,959)	31,500	22,790	$110,983	$366,889	$272,981	$707,166	$1,258,478	14.0	$20,973	$21,211	1:0.92
Daingerfield	$367,046	$511,591	($144,545)	10,137	19,464	$89,981	$242,769	$237,152	$401,986	$803,611	7.0	$11,057	$20,649	1:1.64
Davis Mountains/ Indian Lodge	$1,834,513	$2,273,251	($438,738)	37,588	64,104	$645,748	$1,181,433	$1,384,306	$2,566,154	$4,819,379	42.0	$98,425	$10,446	1:3.16
Dinosaur Valley	$720,296	$722,282	($1986)	91,135	22,635	$1,234,921	$200,018	$458,518	$1,118,363	$1,904,796	24.7	$39,602	$80	1:230.88
Eisenhower State Park	$797,145	$840,279	($43,134)	30,530	51,949	$419,582	$568,508	$402,856	$952,383	$1,670,482	19.5	$36,788	$2,212	1:9.34
Enchanted Rock	$1,436,113	$577,755	$858,358	225,208	22,121	$6,073,860	$140,911	$1,995,083	$3,877,591	$6,579,385	88.8	$244,245	–	–
Fort Richardson	$179,746	$582,397	($402,651)	14,267	19,797	$171,187	$182,441	$273,104	$449,695	$881,244	7.3	$10,413	$55,158	1:0.68
Galveston Island	$739,845	$732,637	$7208	71,016	43,358	$2,999,213	$808,129	$1,484,686	$2,889,692	$4,862,463	57.7	$145,921	–	–
Garner	$2,997,239	$1,495,748	$1,501,491	157,128	240,544	$8,962,871	$4,377,092	$3,543,621	$6,952,511	$11,979,702	149.0	$454,983	–	–
Goliad	$251,430	$642,058	($390,628)	27,461	16,947	$374,080	$219,704	$356,363	$650,323	$1,247,447	11.5	$22,734	$33,968	1:0.91
Hueco Tanks	$199,220	$473,751	($274,531)	19,835	4704	$331,038	$101,003	$311,088	$672,004	$1,152,459	11.6	$25,451	$23,666	1:1.13
Inks Lake	$2,061,740	$1,242,044	$819,696	78,576	122,850	$1,460,185	$1,555,321	$1,035,674	$2,213,622	$3,769,081	47.2	$107,946	–	–
Lake Bob Sandlin	$268,096	$542,518	($274,422)	2153	22,625	$24,219	$196,440	$261,976	$426,887	$820,052	6.5	$9994	$42,219	1:0.95
Lake Corpus Christi	$352,668	$763,439	($410,771)	27,818	36,737	$888,716	$455,380	$566,510	$974,234	$1,792,614	20.0	$45,926	$20,539	1:1.38
Lake Livingston	$791,796	$854,507	($62,711)	44,245	78,218	$603,805	$836,890	$578,440	$1,043,227	$1,914,019	20.5	$46,232	$3,059	1:9.22
Lake Mineral Wells	$751,067	$915,307	($164,240)	35,678	48,823	$571,098	$502,426	$399,242	$982,658	$1,743,804	21.3	$38,648	$7711	1:2.43

(*Continued*)

Table 5. Continued

State parks	Park revenues	Total park budget	State operating surplus/ loss	Non-local day visitor days	Non-local overnight visitor days	Annual expenditures of non-local day visitors	Annual expenditures of non-local overnight visitors	Impact on labor income	Impact on value added	Impact on output	Number of jobs created	Sales tax	Cost per job	Leverage of state dollars to labor income
Lake Ray Roberts	$2,314,762	$2,149,717	$165,045	463,807	231,635	$8,853,643	$2,957,729	$3,423,263	$6,205,780	$9,997,757	132.4	$334,311	–	–
Lake Somerville	$610,120	$945,011	($334,891)	209,139	261,424	$2,969,290	$2,632,102	$1,331,635	$2,420,091	$4,087,174	55.2	$145,250	$6067	1:3.98
Lyndon B. Johnson	$179,529	$626,040	($446,511)	86,958	N/A	$3,170,607	N/A	$1,076,616	$2,184,179	$3,798,326	46.7	$127,769	$9,561	1:2.41
Martin Dies, Jr.	$440,120	$719,996	($279,876)	14,574	48,861	$546,726	$549,834	$522,292	$893,034	$1,615,227	16.1	$36,064	$17,384	1:1.87
Palo Duro Canyon	$1,549,788	$993,018	$556,770	141,749	46,807	$6,466,982	$847,494	$1,992,981	$3,744,740	$6,520,782	86.0	$237,125	–	–
Pedernales Falls	$879,425	$790,974	$88,451	95,344	54,895	$2,273,979	$680,218	$733,788	$1,732,885	$3,036,683	41.1	$94,216	–	–
Seminole Canyon	$116,948	$454,734	($337,786)	7254	8495	$266,063	$97,224	$192,110	$463,044	$828,246	9.0	$15,775	$37,532	1:0.57
Tyler	$1,104,833	$1,045,173	$59,660	41,630	70,382	$2,457,028	$1,029,806	$1,421,310	$2,532,327	$3,993,279	47.0	$112,151	–	–
Washington on the Brazos	$327,690	$591,157	($263,467)	87,537	N/A	$1,783,589	N/A	$591,515	$1,290,756	$2,257,141	30.4	$68,943	$8667	1:2.25

Table 6. Summary of Findings for 60 State Parks (Fiscal Year 2014)

State parks	Park revenues	Total park budget	State operating surplus/ loss	Non-local day visitor days	Non-local overnight visitor days	Annual expenditures of non-local day visitors	Annual expenditures of non-local overnight visitors	Impact on labor income	Impact on value added	Impact on output	Number of jobs created	Sales tax	Cost per job	Leverage of state dollars to labor income
Abilene	$354,810	$674,894	($320,084)	4128	27,545	$66,956	$327,235	$332,707	$707,863	$123,8681	13.9	$19,082	$23,028	1:1.04
Atlanta	$108,622	$257,079	($148,457)	2259	13,992	$36,641	$166,225	$129,650	$234,910	$451,116	3.9	$7704	$38,066	1:0.87
Bastrop	$738,129	$1,030,008	($291,879)	49,101	49,695	$1,757,816	$782,199	$893,269	$1,679,242	$3,061,673	35.6	$88,791	$8199	1:3.06
Battleship Texas	$1,085,007	$1,018,964	$66,043	64,544	189,604	$2,310,675	$2,984,367	$2,270,252	$3,707,296	$5,569,888	56.9	$154,100	–	–
Big Spring	$900	$98,586	($97,686)	21,356	N/A	$764,545	N/A	$201,000	$403,629	$670,426	8.8	$24,269	$11,101	1:2.06
Blanco	$374,999	$452,540	($77,541)	23,107	31,758	$374,796	$377,285	$280,636	$679,311	$1,174,652	13.8	$30,878	$5,619	1:3.62
Bonham	$137,857	$289,574	($151,717)	3334	39,923	$54,077	$474,285	$201,607	$362,964	$672,369	7.2	$17,374	$21,072	1:1.33
Buescher	$245,770	$399,349	($153,579)	13,112	26,314	$212,677	$312,610	$289,082	$528,126	$985,953	9.7	$18,333	$15,833	1:1.88
Caddo Lake	$408,340	$545,752	($137,412)	23,746	28,578	$385,160	$339,507	$271,451	$616,789	$1,065,354	12.3	$23,567	$11,172	1:1.98
Caprock Canyons & Trailways	$205,002	$579,151	($374,149)	19,574	52,746	$457,953	$811,708	$515,468	$1,033,281	$1,947,325	22.6	$55,500	$16,555	1:1.38
Cedar Hill	$1,814,151	$1,706,997	$107,154	40,029	76,277	$1,433,038	$1,200,600	$1,956,314	$3,177,938	$4,715,674	41.7	$90,407	–	–
Cleburne	$349,781	$483,724	($133,943)	5556	32,947	$90,118	$391,410	$306,413	$534,457	$981,554	9.0	$18,658	$14,883	1:2.29
Colorado Bend	$218,730	$410,829	($192,099)	12,837	31,734	$300,386	$488,386	$319,429	$590,250	$1,108,412	11.7	$29,349	$16,419	1:1.66
Cooper Lake	$570,631	$1,233,988	($663,357)	3795	44,380	$61,555	$527,234	$750,033	$1,349,704	$2,554,129	21.3	$28,723	$31,144	1:1.13
Copper Breaks	$59,319	$294,026	($234,707)	742	9987	$12,035	$118,646	$128,099	$231,271	$456,141	3.8	$6736	$61,765	1:0.55
Devil's River	$21,084	$389,651	($368,567)	551	1102	$12,893	$16,960	$101,349	$281,595	$517,351	5.2	$5599	$70,878	1:0.27
Devil's Sinkhole	–	$8,336	($8,336)	1639	N/A	$38,353	N/A	$12,807	$23,786	$44,089	0.5	$1660	$16,672	1:1.54
Fairfield Lake	$237,117	$470,164	($233,047)	15,461	21,951	$250,777	$260,778	$236,238	$548,424	$922,908	10.3	$21,071	$22,626	1:1.01
Falcon	$285,950	$405,406	($119,456)	47,005	26,868	$762,421	$319,192	$335,633	$638,533	$1,156,467	13.8	$34,920	$8,656	1:2.81
Fort Boggy	$1450	$99,215	($97,765)	1090	N/A	$17,680	N/A	$39,057	$66,277	$134,563	1.0	$1179	$97,765	1:0.40
Fort Leaton	$19,496	$284,766	($265,270)	3594	N/A	$84,085	N/A	$157,892	$274,482	$426,090	3.6	$6179	$73,686	1:0.60
Fort Parker	$194,519	$453,378	($258,859)	6952	21,101	$112,761	$250,680	$232,232	$405,408	$790,742	7.0	$13,086	$36,980	1:0.90
Franklin Mountains	$140,328	$488,587	($348,259)	6089	1108	$98,764	$13,163	$238,384	$518,852	$868,050	8.4	$14,579	$41,459	1:0.68
Goose Island	$720,533	$787,265	($66,732)	52,582	91,860	$852,880	$1,091,297	$563,059	$1,309,592	$2,214,757	28.1	$67,259	$2375	1:8.44
Government Canyon	$271,735	$619,340	($347,605)	5046	12,105	$81,846	$143,807	$384,558	$749,241	$1,209,477	10.9	$18,857	$31,890	1:1.11
Guadalupe River/Honey Creek	$863,780	$886,557	($22,777)	79,053	43,004	$2,830,097	$676,883	$1,268,347	$2,298,378	$3,696,253	45.1	$118,396	$505	1:55.69
Hill Country	$138,037	$402,467	($264,430)	6129	8286	$99,412	$98,438	$173,302	$363,682	$655,939	7.0	$12,744	$37,776	1:0.66
Huntsville	$1,410,723	$1,022,898	$387,825	99,620	84,045	$3,566,396	$1,322,868	$1,274,768	$2,729,248	$4,541,345	60.5	$161,897	–	–
Kickapoo Cavern	$16,020	$226,397	($210,377)	1158	2597	$27,097	$39,965	$86,339	$168,221	$345,404	2.8	$5267	$75,135	1:0.41
Lake Arrowhead	$130,188	$462,591	($332,403)	4267	14,572	$69,211	$173,115	$210,150	$355,070	$703,729	5.9	$8482	$56,339	1:0.63

(*Continued*)

Table 6. Continued

State parks	Park revenues	Total park budget	State operating surplus/ loss	Non-local day visitor days	Non-local overnight visitor days	Annual expenditures of non-local day visitors	Annual expenditures of non-local overnight visitors	Impact on labor income	Impact on value added	Impact on output	Number of jobs created	Sales tax	Cost per job	Leverage of state dollars to labor income
Lake Brownwood	$436,989	$848,712	($411,723)	10,493	37,280	$170,196	$442,886	$508,167	$891,023	$1,671,496	14.8	$28,248	$27,819	1:1.23
Lake Casa Blanca	$766,819	$806,507	($39,688)	17,539	18,096	$627,896	$284,831	$387,743	$993,500	$1,795,980	21.3	$39,358	$1863	1:9.77
Lake Colorado City	$66,501	$315,559	($249,058)	1008	4106	$16,350	$48,779	$140,600	$222,142	$423,886	3.0	$3960	$83,019	1:0.56
Lake Tawakoni	$405,604	$427,147	($21,543)	33,625	34,588	$786,690	$517,455	$376,971	$945,505	$1,717,993	19.1	$38,743	$1128	1:17.50
Lake Whitney	$455,267	$558,864	($103,597)	17,103	44,926	$277,411	$533,721	$352,307	$640,779	$1,192,982	12.2	$27,890	$8,492	1:3.40
Lockhart	$277,992	$537,248	($259,256)	4428	15,470	$71,822	$183,784	$260,969	$438,626	$856,084	6.9	$10,920	$37,573	1:1.01
Lost Maples	$527,262	$428,185	$99,077	49222	30,124	$1,151,597	$463,578	$623,104	$1,111,962	$1,925,374	23.4	$65,003	–	–-
Martin Creek Lake	$260,017	$510,482	($250,465)	8677	28,770	$140,741	$341,788	$307,237	$551,160	$1,027,113	10.2	$22,017	$24,555	1:1.23
McKinney Falls	$1,138,309	$692,919	$445,390	23,689	61,744	$848,066	$971,851	$555,621	$883,146	$1,316,356	16.1	$46,829	–	–
Meridian	$167,579	$353,081	($185,502)	9174	15,273	$148,802	$181,443	$177,495	$389,000	$655,845	7.3	$15,477	$25,411	1:0.96
Mission Tejas	$56,834	$266,575	($209,741)	2956	7411	$47,946	$88,043	$120,902	$250,151	$423,388	4.1	$6659	$51,156	1:0.58
Monahans Sandhills	$143,350	$252,847	($109,497)	12,401	12,531	$201,144	$148,868	$161,662	$292,314	$532,560	5.0	$11,211	$21,899	1: 1.48
Monument Hill/ Kreische Brewery	$1119	$222,577	($221,458)	13,269	N/A	$215,223	N/A	$50,308	$159,647	$304,389	3.2	$3837	$69,206	1:0.23
Mother Neff	$60,629	$240,021	($179,392)	3984	5613	$64,620	$66,682	$121,055	$216,377	$404,552	3.4	$6820	$52,762	1:0.67
Mustang Island	$756,412	$657,400	$99,012	17,932	57,244	$641,966	$901,021	$651,946	$1,285,094	$2,134,014	24.5	$54,378	–	–
Old Tunnel	$18,498	$64,178	($45,680)	34,593	8415	$809,337	$129,498	$253,047	$491,997	$846,583	11.2	$33,258	$4079	1:5.54
Palmetto	$238,660	$504,392	($265,732)	19,244	51,926	$312,138	$616,881	$368,519	$662,509	$1,210,107	12.7	$29,493	$20,924	1:1.39
Possum Kingdom	$279,499	$649,656	($370,157)	6410	28,347	$149,968	$436,232	$378,162	$674,349	$1,272,250	11.8	$25,124	$31,369	1:1.02
Purtis Creek	$329,652	$501,685	($172,033)	19,637	28,649	$318,512	$340,350	$316,233	$569,213	$1,065,017	10.7	$23,445	$16,078	1:1.84
San Angelo SP	$311,467	$422,865	($111,398)	6133	27,225	$99,477	$323,433	$200,230	$476,263	$840,830	9.2	$17,240	$12,108	1:1.80
San Jacinto Battle-ground and Monument	–	$1,250,507	($1,250,507)	N/A	N/A	N/A	N/A	$732,217	$1,311,822	$2,010,843	15.0	$22,658	$83,367	1:0.59
Sea Rim	$34,302	$405,208	($370,906)	11,194	34,762	$181,567	$412,973	$285,777	$545,761	$897,366	9.6	$19,129	$38,636	1:0.77
Sheldon Lake	–	$375,453	($375,453)	2116	49,517	$34,322	$588,262	$389,118	$658,719	$995,256	9.2	$21,078	$40,810	1:1.04
South Llano River SP	$334,331	$405,518	($71,187)	13,848	38,972	$224,615	$462,987	$244,433	$559,878	$950,456	11.7	$26,057	$6,084	1:3.43
Stephen F. Austin	$442,948	$548,916	($105,968)	16,826	42,341	$272,918	$503,011	$355,132	$602,516	$1,111,927	11.3	$22,829	$9,378	1:3.35
Village Creek	$119,302	$335,146	($215,844)	1822	15,784	$29,553	$187,514	$225,819	$355,802	$526,273	4.8	$9200	$44,967	1:1.05
WBC/Bentsen-Rio Grande	$136,291	$706,454	($570,163)	20,167	302	$42,464	$3588	$325,621	$666,851	$1,089,801	9.5	$14,188	$60,017	1:0.57

A summary of the findings for the 29 state parks at which data were collected is shown in Table 5. The same process was used in extrapolations to the other 60 state parks, and these findings are reported in Table 6

CONCLUDING COMMENTS

The data demonstrated the economic importance of state parks to local communities. Most state parks reported an operating loss and required subsidies from the state budget. However, the state's subsidy represents an investment in the local communities in which the parks are located that leverages a substantial return. For example, Lake Somerville state park (Table 5) reported annual revenues of $610,120, while its operating costs were $945,011, so it lost $334,891. However, the park generated 55.2 jobs and over $1.3 million in income for the residents of Burleson and Lee Counties. This equates to a cost to the state of approximately $6067 per job ($334,891/55.2) and a leverage rate of 1:3.97, that is, each net state dollar invested generated almost $4 of income for local residents. It is likely that this level of return on public investment would be widely applauded if it were announced by an economic development agency in the context of a manufacturing plant or service business that the agency had assisted in locating in a community.

In some ways, state parks are analogous to retail stores. The park, like a store, is a facility, but it is only a shell. Merely providing a facility is no guarantee of economic success. Economic success is dependent on what happens inside the park. If the retail store invests in attractive, popular products or services, then the store is more likely to be economically successful. Similarly, the economic success of parks is reliant on investment in services and amenities inside them: structures, infrastructure, concessions, special events, trails, environmental education centers, interpretation programs, etc. Such investments will likely lead both to more visitors and to higher per capita expenditures per visitor. The result of such investment will be higher revenues to the state and more jobs and income to residents in the parks' host communities. The converse also is likely to apply. Reduced state investments will likely lead to fewer visitors and reduced revenues both to the state and to the host communities. This analogy resonates with legislators.

Parks traditionally have not been evaluated in economic terms, because advocates believe that there are many other appealing and rational justifications for acquiring and operating them. Unfortunately, when park providers have to compete for funds with other public services, these traditional justifications do not propel parks to a position of prominence. In the minds of elected officials and taxpayers, parks are perceived to be a discretionary service which has a much lower funding priority than primary/secondary education, higher education, highways, health care, prisons, etc.. Thus, when government is forced to allocate budget cuts among these amenities, parks are likely to be disproportionately adversely impacted.

The only way to avoid this outcome is to change the context of the debate so parks are perceived to be a service that is essential to the material economic (as opposed to spiritual/psychological) well-being of citizens. This change of context is essential to reflect the pervasive, persuasive rhetoric of elected officials who say, "I am in favor of parks, but we cannot afford them in the present difficult economic situation because there are more pressing priorities." If the debate parameters are changed so the discussion revolves around jobs and incomes, then there is greater likelihood that adverse budgetary impacts on parks can be ameliorated.

The challenge of park providers and advocates is to achieve widespread recognition of

the economic contributions of parks and to measure them, so they are adequately represented in the planning, social, and political calculus of budgetary decisions. In Texas, recognition of the centrality of parks to tourism was a key to creating momentum for initially establishing a state parks system in the 1920s and 1930s. In recent decades, park providers and advocates disregarded this economic rationale. The economic case for parks was similarly prominent in creating momentum for the US National Parks system in its formative years, and played a role in many other state park systems. These original rationales for parks remain potent if they are prominent in legislative budget discussions.

This paper has demonstrated how to generate data at a relatively low cost to support the economic case for repositioning parks as economic engines in host communities by using volunteers to collect the data, simple procedures for assessing its likely representativeness, and a method for generalizing the data to parks at which none were collected.

It is recognized that IMPLAN is a resource unique to the USA, so the development of output, value added, labor income, and jobs measures may not be feasible in other contexts. This does not detract from the utility of the approach described here. Indeed, the potential abuse of output measures led to the following recommendation, "Given the complexities associated with multipliers, the wisest course of action for park and recreation professionals is to focus their efforts on obtaining a good estimate of visitor spending and not attempt to use multipliers"(Crompton, 2010, p. 37).

The report provides a "selling" document with evidence for advocates to use to lobby legislators, and to make presentations to influential groups and the media in their local communities. However, two points should be stressed. First, it is of paramount importance that data are collected and analyzed with integrity. Economic impact studies are notorious for creating hyperbolic numbers created by false assumptions. If faulty analyses are suspected, then the whole lobbying effort is undermined. Second, legislators turn over, so there is an ongoing challenge to repeatedly establish this revised economic engine position with new legislators. Repositioning is a difficult task because it involves shifting widely held, long-established attitudes towards parks. Hence, it is likely to take many years of persistent reiteration of the economic engine role of parks before it becomes widely accepted again as conventional wisdom.

DISCLOSURE STATEMENT

No potential conflict of interest was reported by the authors.

NOTE

1. A copy of the survey can be obtained by emailing jjy0326@tamu.edu.

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