

Impacts of Resource-Based Tourism on Local Income and Employment

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Abstract.—A relatively new emphasis in resource-based recreation management and planning is the increased attention given to the impact of leisure opportunities on local and regional economies. Communities have worked hard to attract the spending associated with festivals and vacations, but state and federal agencies have just started to make progress to estimate the economic impact of proposed or existing resource-based recreation opportunities. There is widespread demand for data and methods for estimating the amount and distribution of these economic impacts. The Public Area Recreation Visitor Survey has been, foremost, a methodology development exercise for assessing the economic impact of proposed changes in recreation opportunities or demand. The accompanying data set was built through a nationwide multiagency effort and was designed to be adaptable for response to several economic impact questions.

Resource managers are often faced with evaluating alternatives in making important decisions. For recreation development or opportunity modification decisions, they must rely heavily on information provided to them by recreation planners. Recreation planners must be able to adequately explain the possible effects of alternate strategies or actions. One effect of recreation resource management decisions which is currently receiving much attention is the potential economic impacts on local or regional economies. Economic impact is a term in sharp contrast with the more widely used concept of economic value. Economic value is typically identified as the willingness to pay for the opportunity to recreate and, as such, represents the worth of on-site recreational access (see Walsh,

this volume). Economic impact mostly concerns the distribution of spending and production that results as a by-product of a recreational visit. It is an effort to estimate the magnitude of gains or losses which are likely to occur among industries within the impact area as a result of a change in recreation visitation. That change in visitation could be the result of a change in such demand factors as increased population, substitution of activities, or change in socioeconomic conditions, or the change in visitation could be the result of a change in supply factors, such as policy, entrance requirements, or capacity. Impact on the economy can be examined in great detail. Analysis is intended to go beyond determination of only the "direct effects," which are simply income and employment changes as a result of sales or services to recreation visitors and the managing agency. The "indirect effect" refers to income received by additional firms selling goods and services to those impacted directly by consumer spending. "Induced effects" are derived when earnings from direct and indirect sales are spent locally, providing income to persons and businesses who may be neither directly nor indirectly involved in the sale of recreational products and services. The total economic impact of expenditures related to recreational visits is the sum of direct, indirect, and induced effects (Walsh 1987).

Although total expenditures often appear high, the net contribution to the economy of recreation-related expenditures is usually much less. A large portion of retail sales in rural areas, such as those surrounding parks and reservoirs, is often sent out of the area through wholesale purchases of items which are not produced locally (Bromley 1972). Early examinations of economies near federal reserves found that from 10 to 28 cents of each dollar spent for restaurant meals were worker and proprietor income (Clawson 1962). In service sectors, such as lodging, the figure was closer to 50 cents because of the use of local labor to generate the expenditure.

Tourism, or visitation to parks for recreation, generates an interesting mix of direct impacts. While reference is often made to the "tourist industry," there are actually a number of industries that generate sales to visitors but who also serve local residents and industries as well. It quickly becomes evident that appropriate impact analysis needs to look at individual sectors of the economy to determine specific effects of expenditures. Past efforts which highly aggregated expenditures or

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reported only total expenditures, however specific to industries, have been appropriately criticized (Gramman 1983, Lichty and Steimes 1982).

In requesting estimates of economic impact, many planners and managers are interested in knowing regional multipliers. "Economic multiplier" is a very important concept, though it is one that is sometimes difficult to grasp. Walsh (1987) defined the multiplier as the total effects divided by the direct effects. Multipliers are the result of first and all subsequent rounds of spending for inputs and consumer products and services. The multiplier times the direct effect equals the total effect. The greater the multiplier, the greater is the amount of economic activity associated with a change in visitor expenditures.

Maintaining information that describes the importance of shifts in recreation consumption as a component of the economy and that describes the value of recreation opportunities to consumers is one of the targets of recreation and tourism research. An interagency research effort was initiated in 1984 to develop methods to credibly estimate the economic impacts of recreation and tourism.

Public Area Recreation Visitor Study

In 1982, plans were being formulated for replicating the 1977 Federal Estate Visitor Survey. At the same time, several state and federal agencies and related national associations, including the National Association of State Park Directors (NASPD) and the Council of State Planning Agencies, were independently seeking ways to credibly estimate the economic benefits of recreation and tourism. With the joint leadership of the USDA Forest Service, U.S. Army Corps of Engineers, National Park Service, and the NASPD leading economists and scientists working in this area of recreation and tourism, economics were assembled to develop a system for producing credible and cost-effective estimates of the various economic parameters related to recreation and tourism.

Currently six federal agencies, 12 states, four national associations, and six universities are cooperating to apply a state-of-the-art system called Public Area Recreation Visitor Study (PARVS). Data have been collected nationwide since June 1985

and will continue. While some data sets are complete, some additional state agencies are just beginning to collect data. There have been more than 35,000 contacts made with recreation visitors. More than 8,000 of those visitors have provided detailed information about their annual and trip-related expenditures. Expenditure data were collected by all states involved, though federal agencies restricted expenditure data collection to the Southern Region of the United States (see below).

States and federal agencies currently participating in the Public Area Recreation Visitor Study

States	
Georgia	New Mexico
Indiana	North Carolina
Kansas	South Carolina
Missouri	Tennessee
Minnesota	Virginia
New Jersey	

Federal Agencies

National Oceanic and Atmospheric Administration
National Park Service
Tennessee Valley Authority
U.S. Army Corps of Engineers
USDA Forest Service

Data were collected in three phases:

1. On-site: Interviews were conducted during a recreation trip to describe recreation visitors, their recreation behavior, and their travel patterns. The methodology developed required roadside interviews of visitors as they exited the site. Basic data were collected on group and individual characteristics and activity participation. All data elements were designed to be comparable with Bureau of Census and other national survey definitions, categories, and standards.

2. At home: Selected visitors interviewed at recreation areas were mailed a follow-up questionnaire after their trip to obtain information about trip-related expenditures. Information was requested on trip-related expenditures made at home, before or after the trip; during travel to or from the site; and in the immediate vicinity of the site itself. Also, annual expenditures for durable items used on the trip were described.
3. About the site: Recreation planners or managers were asked to provide descriptions of visitation to their area so that estimates of economic importance can be extrapolated to recreation sites with attributes similar to the sites actually studied.

Analysis

Trip expenditures made to participate in recreational activities must be examined in relation to defined impact regions. Of primary interest are usually those expenditures made within the impact region by residents of other regions. These expenditures represent outside money flowing into the regional economy. It is assumed that without the study park, these revenue dollars would not flow into the region. Resident expenditures are not typically considered because they represent money already in the region.

The argument has been made, however, that if the park was not located in the region, expenditures to participate in resource-based types of recreation by residents would likely occur at parks in some other region or that this money may be spent on items or activities with lower "value-added" percentages. While economic impact usually refers to income changes resulting from expenditures by nonresident visitors to a region, some justification for examination of resident expenditures related to recreation visits is evident.

Expenditure of dollars by residents does not represent new income to the region. These expenditures may, however, represent a significant redistribution of income. A look at the "significance" or overall magnitude of expenditures for recreation will likely be justified including those spent by both residents

and nonresidents because of their income distribution effects. The potential problem with including resident spending is that the results may be misinterpreted as new income in the region of concern. The proper interpretation is that resident spending represents the interrelatedness between a park and a regional economy.

The expenditure items included in the PARVS mail-back questionnaire were developed specifically to "bridge" to IMPLAN, a state-of-the-art input/output model and data base that simulates the United States economy based on the 1982 Census of Business. IMPLAN provides estimates of the amount of personal and property income, employment, taxes, value added, overall production, and spending in a specified county, group of counties, state, region, or nation. IMPLAN is the product of the Land Management Planning Division, USDA Forest Service. The second version of IMPLAN is currently operated from Fort Collins, Colo., where software and the supporting data base reside on the Fort Collins Computing Center mainframe computer. Efforts to complete a microcomputer version of IMPLAN will soon be concluded.

For the revised version of IMPLAN, attributes of the software system particularly relevant to analyzing recreation and tourism have been emphasized (Alward and Lofting 1985). In addition to improvement of software for Version II, extensive collaboration between the IMPLAN development staff and PARVS coordinating scientists has provided excellent bridging of PARVS data. Highly disaggregated commodity and service groups are used for basic allocation of expenditures (Watson and Bratcher 1987).

Application

Economic impact information appears to be in high demand. There are many reasons why this type of information is desired by recreation management agencies. With the testing and intense review of impact assessment methods by the PARVS multiagency team of scientists and planners, a tremendous amount has been learned about why this type of information has been requested and how people hope to use it. One of the most frequently cited expectations expressed by public agency planners is that of improved cooperation be-

tween public and private concerns. A true understanding of the distribution of economic benefits resulting from visitation to recreation sites in a community is very desirable. Many feel that when the true economic effects are seen by local business people, a more sincere interest may develop (in cases where it does not already exist) to form a strong partnership in planning and providing recreation.

In a recent effort by the Tennessee Valley Authority (TVA), using PARVS expenditure data, projected changes in use due to proposed changes in services provided by the agency were estimated to produce up to an additional \$257 million annually in total impact, depending on which proposal is ultimately selected (Cordell et al. 1987a). The employment increases across the proposed options could be from 44 to more than 4,000 new jobs. Estimates of multipliers varied for various user groups with different expenditure patterns. Across all user groups examined, multipliers ranged from 1.75 to nearly 2.3. TVA officials expressed hope that the region could be enlisted in a cooperative spirit that would result in a thriving tourism economy in the 12-county Land Between the Lakes region. Public response to impact projections was positive (Anonymous 1987).

Some very useful information which is expected to result from economic impact analysis is the extent of the impact of different activity groups. In weighing planning recommendations, a better understanding of the different economic effects of different user groups on a specified economy is highly desirable. For instance, the Army Corps of Engineers is actively working to trace the effects of expenditures by those who participate in boating activities compared to those who do not. Other groups of interest to various agencies are campers, day users, nature-oriented activity groups, and wilderness visitors. Early analysis of wilderness visitor expenditures suggests that impacts derived from this group may more closely approach those of more development-oriented users than previously expected (Watson et al. 1986). While wilderness-related recreation appears to not be expenditure intensive, the socioeconomic class of many wilderness users allows for some previously unexamined expenditures in the local region.

Another need for economic impact analysis results expressed by planners is for justification of keeping open nonrevenue-producing parks. In a time of shrinking budgets, yet

stable demand levels, local economic effects of recreation services may provide incentives to continue operations which are not financially self-supporting.

Some specific questions that have been proposed by PARVS cooperators (Cordell et al. 1987b) include the following:

1. How much business income and employment could be generated by providing a new recreation area or expanding opportunities in a rural, economically-depressed county?

Through the use of PARVS methodology, alternative development programs can be evaluated. Current research efforts are not to determine fixed estimates of impact from various types of use, but rather to develop a tool to use to evaluate the relative magnitude of impacts expected to result from alternatives proposed.

The PARVS methodology for data collection and bridging, teamed with the IMPLAN data set and computer software, allows the relative impacts to be examined in great detail, as described earlier. For example, selected sectors of the 12-county Land Between the Lakes region have been listed in table 1. For each specific sector listed, the total effects of an increase in visitation due to a proposed development plan are indicated.

It is no surprise to find that the greatest impacts are going to be in the areas of hospitality and recreation services and retail trade. Of course the relative magnitude of these effects would be expected to vary across proposed alternatives. Table 1 also

Table 1.—Selected economic sectors of the 12-county Land Between the Lakes region and changes to total effects predicted to result from a proposed addition of major attractions and services.

Sector	Total gross output (mm \$)	Employee compensation (mm \$)	Proprietor income (mm \$)	Employment (jobs)
Eating and drinking	3.202	0.906	0.250	91
Amusement and recreation	1.874	.669	.368	57
Hotels and lodging	4.197	.827	.650	115
Wholesale trade	1.756	.724	.229	37
Retail trade	3.719	.155	.370	123
Doctors and dentists	.770	.325	.140	6
Hospitals	.726	.358	.010	20
Real estate	.737	.037	.452	4

shows the result of examining the induced effects (probably some direct effects) on nonrecreation-related sectors. Examination of the total effects on specific sectors of the economy is now possible.

2. Do some types of recreation areas provide more local economic stimulation than others?
3. Which businesses are most likely to be affected by closing a particular recreation area to public use? Many wilderness allocation decisions remain to be made. Further clarification of the benefits of wilderness to a local or state economy could greatly influence public sentiment regarding the allocation decision. In other decision situations, the economic effects on specific types of businesses need to be known by the governing agency and the public who is being asked to respond to the proposal.
4. What form of consumption and/or business tax structure would be most appropriate for providing revenues for operating and maintaining recreation areas?

Tourist-related industries have contributed substantially to our Nation's economic recovery and stability. To date, those businesses who serve the tourists are not taxed in any special way, which would support the publicly owned and managed attractant resource. Many discussions over the years have revolved around the appropriateness of recreation visitors to carry more of the recreation management costs of an area through increased fees. The argument is that visitors most likely benefit more from the area's existence than do nonvisitors. Similarly, businesses close to the recreation area likely benefit financially more than those businesses who are not close to the recreation area. If the beneficial economic effects of development programs can be documented, those firms which will benefit from proposed development plans should be more cooperative in contributing to the costs of development through taxes or contributions.

Conclusions

Each agency participating in the Public Area Recreation Visitor Survey is motivated by a different set of expectations. To some agencies the PARVS data collection effort was a pilot test. Adaptation of the measurement instrument and methodology will be incorporated into future rounds of data collection. To others the emphasis is on determining the many applications possible for an individual agency's current data set. In other cases, data pooling is occurring to increase the sample sizes for particular types of areas or for particular types of visitors.

PARVS data and IMPLAN analysis are being used today to determine the economic effects of recreation planning alternatives. With the widespread application of this single measurement instrument, methodology, bridging methods, and analysis procedures, planners can establish credibility for economic impact estimates which are made. A packaged economic impact assessment method has been developed and is near widespread publication and availability. Consideration of how the local, regional, and state economy will be affected as a result of agency activities is now a real possibility.

Recreation and tourism interests will face both good and bad times in future years. Since about 1977, there have been some lean years and many changes have occurred. During these years of change, there were some who gained and some who lost. The methodology being finalized by the PARVS Working Group would have permitted better monitoring and prediction of the consequences, especially of the budget cuts of the recent past. For the recreation and parks community, the tools now exist to monitor actual change and to simulate proposed change. Lack of ability to show concrete evidence of effects of decisions has been one of the more crucial issues that has faced recreation and park interests.

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