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TOURISM

COST-BENEFIT ANALYSIS OF LOCAL TOURISM DEVELOPMENT



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Before developing a plan or deciding to add facilities to increase tourist potential, ask the question, "Is it worth it? Will tourism do for this community what we want done?"

The cost-benefit technique balances costs against benefits to show the estimated net effects of a plan. The study may be very comprehensive, like those prepared by the U.S. Army Corps of Engineers for water resource projects, or it may be rough-and-ready, the type often used by smaller communities.

This publication shows how to develop a rough-and-ready cost-benefit study for tourism assessment.

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Regional Tourism Fact Sheets

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| WREP 144 | THE ECONOMIC IMPACT OF VISITORS TO YOUR COMMUNITY |
| WREP 145 | MEASURING VISITOR EXPENDITURES AND THEIR IMPACT ON LOCAL INCOME |
| WREP 146 | ESTIMATING VISITOR DEMAND AND USAGE |
| WREP 147 | COST-BENEFIT ANALYSIS OF LOCAL TOURISM DEVELOPMENT |

Community leaders, or others involved with tourism-related community development, can use this series of fact sheets to lead a focused discussion on the economic benefits of tourism. Who will benefit from tourism? How many tourists will a new project bring to the community? How much will new tourists spend in your community? This series of fact sheets is designed to address these questions, which must be answered in order to realistically evaluate decisions related to local tourism development.

First, list the applicable benefits, then do the same with costs. Some items will be known with reasonable accuracy, some will be "guesstimates," and others may be unmeasurable. The following information is necessary to estimate benefits and costs.

- An inventory of public support services with the present range and capacity of those facilities. Support services might include police, sewer, water, rest rooms, streets, medical facilities, rescue systems, parks, solid waste arrangements, camp grounds, etc. (see WREP 146 Estimating Community Visitor Days). If the capacity does not meet present or future demands, expansion of those facilities that are in short supply must be taken into account as a cost of tourist development. Be sure to ascertain whether both public and private support services must be expanded. Private support services might include: guide service, hotel and motel rooms, restaurants, transportation.
- A projection of the expected number of visitors (see WREP 146).
- An estimate of the expenditures tourists will make. Multiply the anticipated increase in types of tourists (day visitor, overnight, or camper) by the expenditures expected for each type, including any changes in expenditure levels expected with the new facilities, to estimate the increase in sales as a result of tourism development. WREP 145, Impact of Visitor Expenditures on Local Revenues, gives the procedures for calculating this figure. Benefits most commonly associated with tourism are increased local incomes and employment, but there may be additional benefits.
- Tax revenues might increase, providing tax relief to local residents if additional revenues exceed the costs of additional services.
- Tourism may provide a means of diversifying the existing economy or of reducing the seasonable fluctuations, particularly important in areas dominated by one industry. Of course, tourism can compound the challenges of seasonable variation in many situations.
- Tourists may also be important for cultural or social reasons. The Totem Wood Carving Workshop, located just outside of Ketchikan, Alaska, in the Native Village of Saxman, is a major tourist attraction for thousands of visitors to Southeast Alaska. In addition to providing renewed cultural pride, tourism development has aided Saxman's economy. Local festivals and celebrations are important cultural events and tourist attractions in hundreds of communities.

Any increase in the demand for public services (for example, extra police or improved public rest rooms), is a cost of tourism development. The costs of promotion should also be included. If time is donated, the value of volunteer time may be calculated by multiplying hours worked by an appropriate wage rate, not lower than the minimum wage.

The costs and benefits of tourism development can be measured with varying degrees of precision. Unmeasurable items should be indicated with a plus (+) for a benefit or a minus (-) for a cost (see Figure 1). Environmental costs and community resentment attributable to tourism are examples of negative items. With imagination and research, even these may be given dollar estimates in certain cases, for example costs for hauling additional solid waste, travel delays, higher housing costs, etc.

After all of the costs and benefits have been estimated and entered in the table, subtract the total costs from total benefits to derive net measurable benefits. The net measurable benefits should be positive before a community proceeds with a tourism development program.

Another useful measure is the benefit-cost ratio. This is a "best guess" of the rate of return on identifiable investment costs. If benefits divided by costs

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equal, for example, 1.2, this implies that for every \$1 of costs, \$1.20 will be returned to the community.

However, many important effects of tourism development cannot be considered in economic terms. Pluses and minuses in the table must be considered. Community members can determine appropriate weights for each plus and minus. There may not be agreement whether any one item is a plus or a minus (one person's solitude is another's loneliness) but all items should be consciously listed and net measured benefits calculated. In the course of this procedure, ideas may arise which will accent either the pluses or the minuses.

Because community support is an essential ingredient to the success of a tourism program, consensus is vital. If the pluses outweigh the minuses, perhaps the plan should proceed. If, however, minuses outweigh pluses, maybe the plan should be reconsidered or changed. *Outweighs* is the key, not outnumber.

Use of the cost-benefit technique is illustrated by a case study of Western City, U.S.A. (see Figure 1). Located in the Northwest, Western City has a population of 25,000, which has been stable over the last ten years. The principal industry was and is logging, but for the last five years or so, timber work has been sporadic and the community fears that the town will die.

The Chamber of Commerce proposed that tourism be aggressively developed over a five-year period. The Chamber calculated a benefit-cost ratio of 2.17. Thus, every \$1 of cost should return \$2.17 to the community. Figure 1 shows their calculations. All amounts are in thousands of dollars per year for a five-year period on a 1991 basis (so inflation is accounted for in the costs and benefit estimates).

The \$75,000 in family income was determined by estimating the number of additional tourists who will be attracted to the community. The goal is to bring an additional 10,000 visitors per year, thirty percent of whom are expected to stay overnight and spend an average of \$50 per person per visit. Day visitors are expected to spend \$20 per visit. Thus, tourist expenditures were calculated to be \$290,000 per year. The tourist expenditures were multiplied by 0.4 to estimate the amount of money (\$116,000) retained in the community. This reflects the fact that a portion (0.6) of these expenditures immediately leaves the area to pay for goods and services not provided locally. Research indicates that revenue retained locally in the northwestern United States is between 0.3 and 0.5 of the total money generated by tourists. Thus, local additional money per year is estimated in this example as \$116,000.

Wages were determined by estimating the number of additional jobs necessary to serve an extra 10,000 visitors and \$290,000 of additional sales per year. The inventory of support services and labor supply indicates that five additional full-time jobs would be required at an average salary of \$10,000. There also would be ten additional part-time employees at an average wage of \$2,500 per year for total wages of \$75,000.

Revenues from a bed tax on hotel and motel occupants are expected to increase by \$1,400 per year based on a five percent tax rate and average nightly rates of \$28, with 2,500 of anticipated 3,000 overnight visitors staying in hotels and motels and an average of 2.5 visitors per room.

Inventories indicate that existing private facilities could accommodate the additional tourists, however, there would be increased support service costs. Expansion of the parking lot adjacent to the local park would alleviate parking problems on Main Street as well as at the park. To accommodate the visitors, another part-time police officer and patrol car and a public restroom at the park would be required. Repair of heavily traveled streets was another anticipated expense. A local contractor placed the annual costs of expanding and maintain-

Figure 1. Estimated benefits and costs of proposed tourism development program, Western City, U.S.A. 1992-1996.

	(B) Benefits per year	(C) Costs per year
1. Local Income		
wages	\$75,000	
business profits, interest & rents	<u>41,000</u>	
Sub Total	\$116,000	
2. Local Tax Revenues		
bed tax	\$ 1,400	
property tax	<u>0</u>	
Sub Total	\$ 1,400	
3. Support Services		
parking lot expansion		\$ 7,000
rest rooms (amortized construction & operation)		4,000
patrol car (amortized purchase & operation)		3,000
police officer (benefits & salary)		15,000
street repair (major cost usually for local govt.)		<u>19,830</u>
Sub Total		\$ 48,830
4. Development of Plan		\$ 5,000
5. Preservation of Indian heritage	500 (+)	500
6. Environmental Impact		
solid waste collection & disposal	(-)	(-)
sewer	(-)	(-)
water	<u>(-)</u>	<u>(-)</u>
Sub Total	(-)	(-)
7. Congestion at Local park	<u>(-)</u>	<u>(-)</u>
Totals	\$117,900	\$ 54,330
Net Benefits: Benefits per year	\$ 117,900	
-Costs per year	<u>54,330</u>	
	\$63,570	
Benefit • Cost Ratio:		
\$117,900/\$54,330	\$ 2.17	
“Unmeasurables:” Check the appropriate box		
<input type="checkbox"/> Pluses outweigh the minuses <input type="checkbox"/> Too close to call <input type="checkbox"/> Minuses outweigh the pluses		
Additional Tax Revenue	\$ 1,400	
Additional Public costs	<u>(48,830)</u>	
Net Public sector impact	\$(47,400)	

ing the parking lot at \$7,000. The police officer's salary is estimated at \$15,000 per year. The annual operating costs of the patrol car and rest room facility are estimated at \$7,000. The street department estimated street repair at \$19,830 per year.

Items four and five are "guesstimates" and unmeasurables are presented as pluses or minuses.

Development of tourism can be a positive economic step, but too frequently unmeasurable but important costs are not considered. A cost-benefit analysis provides a framework to identify the likely economic impacts—both measurable and unmeasurable—associated with tourism development.

Figure 2. Calculations and sources of information, tourism development program Western City, U.S.A.

Item	Calculations	Sources of Information
1. Local Income \$116,000	Tourist expenditure x county income multiplier $\$290,000 \times 0.4 = \$116,000$	State Economic and Business Research Division or your own estimation
2. Tourist Expenditure \$290,000	Anticipated number of visitors, 10,000 by type a. overnight: 30% or 3,000 b. day visitors: 70% or 7,000 Anticipated expenditures by type of visitor by visit a. overnight: \$50 per visit b. day visitor: \$20 per visit Overnight expenditures: $3,000 \times \$50 = \$150,000$ $7,000 \times \$20 = \underline{140,000}$ Total \$290,000	Section on estimating demand and usage Travel survey or average figures for your region
3. Wages	Employment by type of worker a. full-time: 5 b. part-time: 10 x prevailing wage rates a. Full-time: \$10,000 per year b. Part-time: \$ 2,500 per year Wages: $\$10,000 \times 5 = \$ 50,000$ $\$ 2,500 \times 10 = \underline{25,000}$ \$75,000	Inventory of support services and labor supply
4. Business profits, interests and rental income	Local incomes - wages $\$116,000 - 75,000 = \$41,000$	

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