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Brian J. Hill

University of Nebraska - Lincoln

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Estimating Tourism's Economic Impact in Nebraska Counties

Developing tourism can enhance the economy. This NebGuide describes how to use lodging tax statistics to estimate the impact of tourism on a community.

Brian J. Hill, Extension Community Tourism Specialist

- [Economic Impact Definitions](#)
- [Travel Expenditure Patterns](#)
- [Nebraska Lodging Taxes](#)
- [Estimation Formulas](#)
- [Secondary Benefits](#)
- [Tourism Economic Development](#)

Every community interested in developing tourism to enhance or diversify their economy wants to know how much good tourism can do for them. While tourism is not the answer to every community's economic challenges, it can provide economic benefits in many cases. These economic benefits must then be compared to the social, cultural and environmental changes that tourism might bring in order to judge its acceptability in community economic development efforts.

Politicians, planners and citizens want to know just how important tourism is to their communities. While some economic benefits and costs are very difficult to calculate, total economic impacts can be estimated relatively easily. This NebGuide describes how Nebraska counties can use lodging tax statistics to estimate local tourism impacts each month, quarter, or year. A description of terms is provided first, followed by an explanation of expenditure patterns and lodging taxes. Next, the formulas needed to estimate economic benefits are presented, and finally, secondary benefit principles are introduced.

Economic Impact Definitions

The most commonly considered economic impacts are direct benefits. *Direct benefits* are the total amount of money spent by tourists within a geographic area (for example, in a Nebraska county).

Expenditure patterns are the breakdown of money spent by tourists in an area by category. Knowing the percentage of money tourists spend for gasoline, lodging, or food is useful for tourism developers. This

information also is crucial in estimating the direct benefits when using lodging tax receipts.

When a lodging tax is collected in a city or county, it provides accurate information to use in estimating the total direct economic benefits. A **lodging tax** is a tax levied on each room rented by any accommodation. The lodging tax is usually a percentage of the room rate and is added to the bill on top of the sales tax.

Secondary benefits refer to the value added to a community that comes from direct expenditures of tourists. The money that circulates through the economy in additional rounds of spending after the initial expenditure will determine the real impact of tourism to a community. Money spent by individuals and businesses outside the community is considered a "leakage," which diminishes secondary benefits on the local economy. Purchasing supplies and labor from within the community increases secondary benefits.

Multipliers are measures that estimate the secondary benefits to a community from tourism. For example, if the multiplier were 1.5, then total direct benefits would be multiplied by that number to estimate the total amount of economic activity generated by tourism. Much controversy surrounding multiplier application suggests that they cannot currently be used with confidence.

Travel Expenditure Patterns

The pattern of tourist expenditures by category forms the basic assumption for estimating direct expenditures on tourism. The percentage of tourism dollars spent on lodging is particularly important to this process. Expenditure patterns remain relatively stable over time even though the overall amount of money changes dramatically. *Table I* shows the expenditure pattern of tourist spending in Nebraska in 1983 and 1989. 1989 is the most recent comprehensive survey of Nebraska tourists and their spending.

Though the overall amount spent surely rises each year, the table shows that the percentage distribution of money spent on different categories stays relatively constant. Therefore, using Nebraska's lodging tax, one can calculate the amount spent on lodging in a given area. With that calculation and an estimate of the percentage spent on lodging by tourists, an estimate of the total amount of tourist spending in an area can be made.

- A special caution about expenditure patterns should be noted here. In this process it's assumed that expenditure patterns remain relatively stable over time. *Table I* gives evidence that this is the case. It also is assumed that a particular county has the same expenditure pattern as the whole of Nebraska. For counties along the interstate, this is likely to be true; but for outlying counties, expenditure patterns may be quite different. It is recommended that those counties that adopt this process of impact estimation survey tourists directly to determine the expenditure pattern for that area.

	1983 Visitor survey		1989 Visitor survey	
Auto	30%	—	30.0%	—
Lodging	26%		27.4%	
Food	24%		23.1%	
Groceries	5%		7.7%	
Shopping	7%		6.6%	
Attractions	6%		3.2%	
Camping	2%		1.9%	

*Source: Nebraska Division of Travel and Tourism Summer Visitor Surveys

Nebraska Lodging Taxes

Nebraska provides a county option lodging tax of 1, 1.5, or 2 percent on hotel, motel, bed and breakfast and private campground charges. Each county board of supervisors or commissioners may establish a

lodging tax after a public hearing on the subject. Many counties in Nebraska have put into place a lodging tax. These lodging taxes are collected by the Department of Revenue and returned to the counties for tourism marketing and development. Because the lodging taxes are carefully monitored, they can form the basis for direct tourism expenditure estimates. A time series of these estimates based on lodging tax collections can demonstrate increases and decreases in tourism activity. They show not only the amount spent on tourism in an area, but also the pattern of tourism growth or decline in the area over time.

Estimation Formulas

The formulas presented in *Table II* are useful in estimating tourism expenditures with the data described above. First, the total lodging expenditures are calculated, then the total tourism spending is estimated. From there, the amount spent on each expenditure category can be figured using the expenditure pattern presented in *Table I*.

For example, lodging taxes collected in Buffalo County in 1996 were \$207,201 and the county lodging tax rate is 2 percent. Therefore, total lodging expenditures equals $\$207,201 \div .02$, which is \$10,360,050. From there, total estimated tourism expenditures equals $\$10,360,050 \div .274$, which is \$37,810,401. Spending in each of the tourism categories also can be calculated with this figure and the percentages found in *Table I*.

Table II. Estimation Formulas

Total Lodging Expenditures	=	$\frac{\text{Lodging Taxes Collected}}{\text{County Lodging Tax Rate}}$
Total Tourism Expenditures	=	$\frac{\text{Total Lodging Expenditures}}{\text{Percentage Spent on Lodging}}$
<ul style="list-style-type: none"> • Local Vehicle Operation Expenditures = Total Tourism Expenditures (Percent Spent on Autos) • Local Food and Beverage Expenditures = Total Tourism Expenditures (Percent Spent on Food) • Local Grocery Expenditures = Total Tourism Expenditures (Percent Spent on Groceries) • Local Shopping Expenditures = Total Tourism Expenditures (Percent Spent on Shopping) • Local Attractions Expenditures = Total Tourism Expenditures (Percent Spent on Attractions) • Local Camping Expenditures = Total Tourism Expenditures (Percent Spent on Camping) 		

Table III lists the lodging taxes collected by counties in Nebraska over the past several calendar years. Information on monthly collection amounts can be obtained from the Department of Revenue at (402) 471-2971 or the Department of Economic Development, Research Division at (402) 471-3801.

Table III. Lodging tax revenue, state and Nebraska counties.

<i>County</i>	<i>Rate</i>	<i>1995</i>	<i>1996</i>	<i>1997</i>
State	1%	\$1,958,152	\$2,055,497	\$2,164,642
Adams	2%	60,713	61,848	62,809
Box Butte	2%	23,443	30,403	30,214
Brown	2%	7,481	7,485	8,165
Buffalo	2%	193,707	207,201	211,937
Cass	2%	20,607	21,498	26,022
Chase	2%	3,096	2,842	3,186
Cherry	2%	38,950	39,853	42,813
Cheyenne	2%	43,658	56,933	60,911
Colfax	2%			4,252
Custer	2%	14,615	13,301	13,617
Dakota	2%	87,048	77,837	75,912
Dawes	2%	39,546	41,986	44,687
Dawson	2%	43,952	48,938	49,222
Deuel	2%	6,513	6,819	7,060
Dodge	2%	45,358	41,925	43,956
Douglas	4%	2,742,093	2,828,052	3,124,608
Fillmore	2%	1,065*	3,567	3,574
Gage	2%	22,805	22,971	26,773
Garfield	2%	3,355	3,288	3,943
Hall	2%	200,712	190,076	195,420
Hamilton	2%	12,887	10,976	10,915
Harlan	2%	5,720	5,024	5,647
Holt	2%	16,995	17,275	20,286
Jefferson	2%	5,462	5,134	7,306
Johnson	2%			1,423*
Kearney	2%		6,286*	10,216
Keith	2%	91,622	95,310	95,709
Kimball	2%	16,440	18,328	17,296
Knox	1%	3,245	3,566	3,810
Lancaster	2%	534,832	584,434	612,153

Lincoln	2%	208,476	208,929	209,786
Madison	2%	67,792	64,735	68,351
Merrick	2%	3,586	5,253	5,299
Morrill	2%	5,242	4,810	4,539
Nemaha	2%	11,882	12,207	12,745
Nuckolls	2%			3,786*
Otoe	2%	31,265 (1.5%)	31,617 (1.5%)	42,838 (1.5-2%)
Pawnee	2%	1,100	1,443	1,268
Phelps	2%	6,697	7,061	7,243
Platte	2%	67,559	62,833	59,581
Red Willow	2%	23,290	25,864	27,631
Sarpy	2%	100,092	119,468	130,660
Scotts Bluff	2%	73,705	74,628	80,424
Seward	2%	10,912	11,653	11,685
Sheridan	2%	5,959	7,106	7,330
Sioux	2%	563	523	628
Thayer	2%			4,625*
Valley	2%			3,224*
Washington	2%	13,212	13,420	11,210
Webster	2%	2,477	2,481	3,013
York	2%	74,177	68,435	81,723
*denotes partial year revenue				

Secondary Benefits

Another important aspect of economic impact is the successive economic activity it generates. These secondary benefits are usually described using multipliers, but multipliers can be misunderstood and misused. Usually, the total economic activity (direct expenditures and secondary benefits) and income generated by tourism have a greater influence on the local economy than the size of the initial tourism expenditures.

Tourism dollars are more likely to generate successive economic activity as the suppliers of tourism businesses are built up in the community. Not only are tourism businesses important, but so are their suppliers. Tourism businesses that are able to buy and hire locally increase secondary benefits; while those that buy and hire outside of the community decrease the magnitude of secondary benefits.

Exact multipliers for Nebraska communities are not readily available. While professionals should be aware of secondary benefit principles, they should avoid impact estimates that use arbitrary economic multipliers.

Tourism Economic Development

Tourism often provides greater economic activity in rural communities than anyone expects. Estimates of direct economic expenditures can be easily calculated for counties that collect lodging taxes. A very important aspect of economic development needs to focus on the suppliers of tourism businesses that increase the secondary benefits from initial tourism spending.

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