Sports Fishing's Economic Impact on the Bethel Census Area

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January 2, 2008

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Introduction

For the most part, transportation and salmon fishing keep most communities in the Bethel Census area within shouting distance of the Kuskokwim and the Goodnews rivers. Those factors have traditionally dictated a subsistence lifestyle but, with a little know-how, a recent influx of sports fishermen could create a better economy for local residents.

In 2002, for instance, 3,626 anglers made 6,866 trips totaling 20,645 days. Two years later, those numbers increased 18 percent to 9,137 trips for 25,391 days (Alaska Department of Fish and Game, 2006).

Unfortunately, most locals have yet to benefit from this potential economic windfall. That fact brings up the purpose of this study: to provide local jobs and other income opportunities based on sports fishermen visits. For example, the guides and services involved in the tourism industry could greatly benefit.

Research Methods

To determine angler attributes, expenditures and demographics during summer 2005, fishermen who purchased a fishing license in the area responded to a survey. That data was then transferred to an input-output model known as Implan to reflect the effects on the Bethel Census Area's economy.

As a software application that offers number crunchers a snapshot of an economy, Implan gathers information to explain the give-and-take and cause-and-effect relationships between all sectors in the economy. It's particularly helpful to predict local economic trends.

The Alaska Department of Labor supplied employment figures and output data for the commercial fishing sector. And, for the sake of consistency, Implan referenced the Regional Economic Information System (REIS) and ES202 data for individual sectors (DOLWD, pers. comm.). Implan economic activity concerns three areas:

- *Direct effect* refers to increases or decreases in production based on demand. For example, anglers spending more money in restaurants will directly affect the restaurant sector.
- *Indirect effect* refers to the secondary impact on businesses based on demand. An increase in food/services requires additional input from other sectors. For instance, when restaurants serve more food, such as fish, seafood processing must increase.
- *Induced effect* refers to more disposable household income from new jobs generated by direct and indirect effects. (Davies et al., 2004)

A business expanding or contracting creates a rippling effect throughout the economy. When Outsiders visit, for instance, they purchase goods and services from area businesses. These businesses in turn require additional goods and services to accommodate the increased demand for their products. That ripple translates into more jobs that require extra labor to meet the demand for these goods and services. Plus, household income increases. Implan links sectors and accounts and shows how payments in one sector multiply throughout the economy.

In the Bethel Census area, angler food expenses appear in Implan sector 481, "Food services and drinking places." Similarly, Implan sector 478, "Other amusement, gambling, and recreation industries" includes the expenditures for guides.

Results

Trip Attributes

Responses to such questions as "number of visits to the region," "primary reason to fish the region" and "best catch" offer insight to market the region as a fishing destination. The average angler, for instance, is 52-years-old with a median household income of $125,000. The national median is $46,242 (U.S. Census Bureau, 2006).

Table 1: Response Rate by Residency Status			
	Surveyed	Returned	Response Rate
Region Resident	1,324	196	15%
Non-Resident	553	169	31%
Total	1,877	365	19%

Of the 365 surveys returned in summer 2006, 31 percent were non-residents, 15 percent residents. In order to better market the fishing destination to non-residents, resident and non-resident responses are separated.

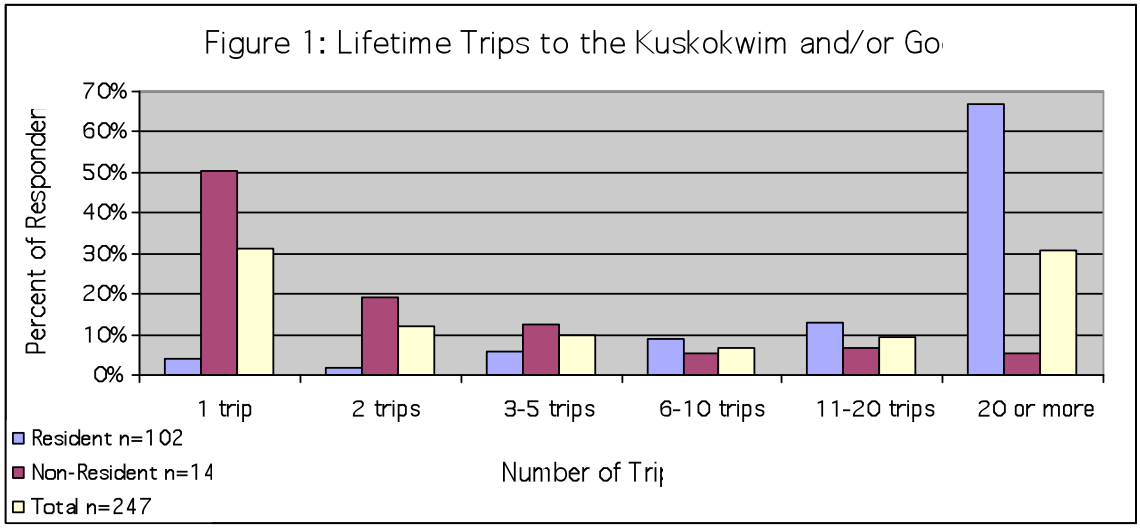

Figure 1 shows that 50 percent of non-resident anglers visited the region once, 20 percent visited twice. Predictably, 67 percent of resident anglers take 20 or more fishing trips.

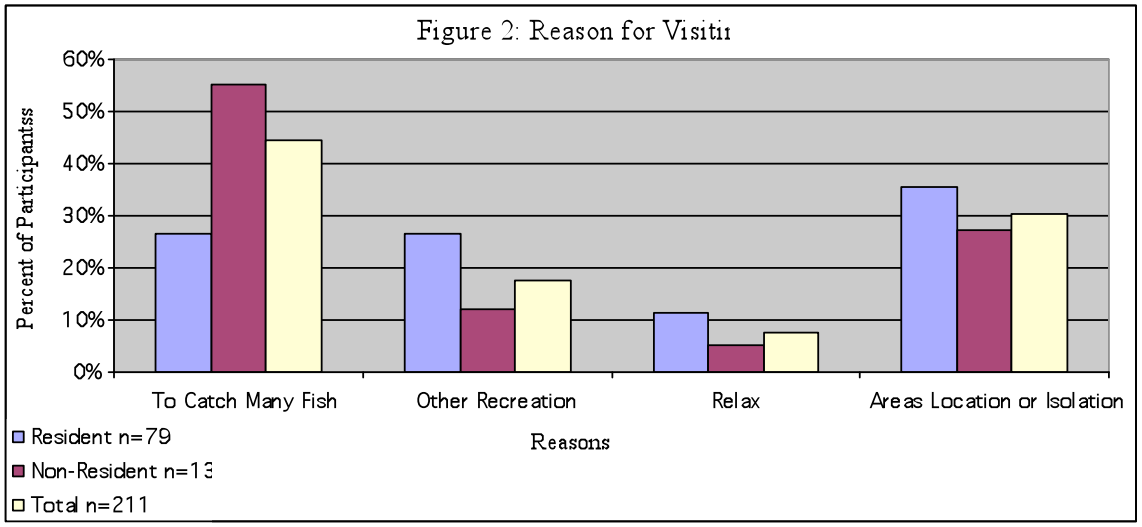

Figure 2: At least 55 percent of non-residents ranked "catching many fish" as most important, with "location and/or isolation" a close second.

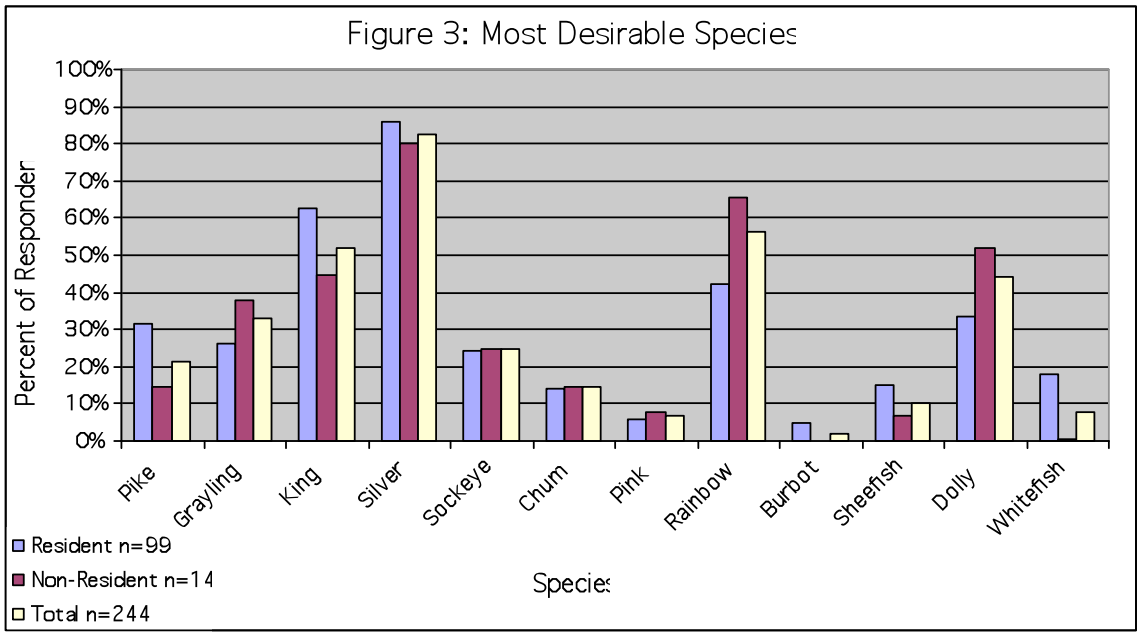

Figure 3: Both non-residents and residents alike prefer silvers. But any similarities end there since non-residents next prefer rainbow trout and Dolly Varden: residents, King Salmon and rainbow trout.

Expenditures and Impact

Anglers next responded to 11 different expense categories – evaluated relative to days visiting and number of people in each group – to reflect spending per angler/per day. The first step divided 25,391 angler days in half between residents and non-residents. Non-residents, for instance, rang up nearly $2.3 million, or 38 percent of the total angler

expenditures, for guiding services in 2005, while residents spent $360,000, or 6 percent of total angler expenditure, for fuel (Table 2).

Table 2: Total Expenditures for Sportfishing in 2005			
	Non-Resident	Resident	Total
Guides	$2,295,560	$13,678	$2,309,2
Airfare	$1,455,272*	$94,937	$1,550,2
Lodging	$798,415	$71,328	$857,7
Fuel	$70,501	$360,411	$430,9
Gear	$177,860*	$131,751*	$309,4
Grocery Food	$122,977	$101,329	$224,3
Restaurant Food	$170,258	$17,971	$188,2
Rental	$61,841	$9,357	$71,1
Moorage	$8,760	$10,360	$19,12
Processing	$13,054	$3,435	$16,4
Derby Fees	$313	$9,080	$9,39
Total	$5,162,812	$823,637	$5,986,2

*Values were adjusted when applied to the input-output m
reflect the nature of the region.

Though non-residents paid $1.46 million in airfare, little of that expense – $150 of a round trip ticket – involves Alaska-based, transportation-related services (Haley et al., 1999). Therefore, after adjusting for inflation, $175 per non-resident was applied to the input-output model. Also, fishing gear purchases were excluded from the Implan model since most anglers bring gear with them.

Table 3: Sportfishing Expenditure Regional Impacts				
	Direct	Indirect	Induced	Total
Output Impact	$4,560,509	$662,247	$1,559,055	$6,781,8
Employment Impact	111.6	5.3	23.4	140.

Nearly $4.6 million paid out by anglers adds $6.8 million to the regional economy when considering indirect and induced impacts. This influx also creates 140 jobs annually in the local economy.

Limitations

This research would benefit from following Dillman's Tailored Design Method (Dillman, 2000). Specifically, sending a pre-notice letter and several follow up mailings with a token gift would improve the response rate considerably. Surveying those anglers who purchased online fishing licenses as well as licenses from local outlets would also up the ante.

Conclusions

The large numbers and varieties of fish combined with the lack of services in the Bethel Census Area create great economic opportunities for local residents.

In 2005, for example, non-residents spent $786,000 for lodging. Considering non-residents' median income of $125,000, lodge or bed & breakfast owners could capitalize as a staging point for fishing trips.

Both residents and non-residents – 50 percent of them first timers – expect "to catch many fish," preferably silvers. Predictably, residents visit more often and spend substantially more on fuel annually. Non-residents, on the other hand, paid $2.3 million for guide services and nearly five times more for other services than the locals.

The final tally of $4.6 million for 2005 actually equates to $6.78 million and 140 new jobs when considering all regional economic sectors.

Recommendations

Local guides should update and expand services to ensure repeat business.

Improve the quality and comprehensiveness of visitors' experiences – especially for first-timers – to make sure they return a second, third and fourth time.

Expand local lodging options for high end users at fishing staging points.

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