BUL 844

The Economic Impact of

Snowmobiling In Valley County

by Ryan Larsen, Garth Taylor, and Steve Hines

Great snow, beautiful scenery, and close proximity to a metropolitan area that values outdoor recreation make Valley County, Idaho one of the top snowmobile destinations in the West.

Valley County is located centrally in the state, a couple of hours' drive from Idaho's largest metropolitan area (Boise). Against the backdrop of abundant amenity resources, the county's trend to a service-based economy raises concerns about job quality and business growth in the county.

Snowmobile recreation is surrounded by controversy: allegations of damage to environment, wildlife, and endangered species; tradeoffs among recreation users; and trail closures or restrictions. All are exacerbated by public land ownership.

Snowmobile enthusiasts, businesses, and county officials want local economic impacts of snowmobiling to be considered in future policy decisions. From the economic development perspective, snowmobile recreation is a high expenditure recreation. Capturing those dollars in the local economy has tremendous potential to make a key contribution to the growing recreation base of Valley County's economy.

© Quicksilver Studios/IdahoStockImages.com

Snowmobile recreation is a high expenditure sport. People spend an average \$316 per person per trip, or \$106 per person per day in Valley County.

Key findings

- **Income vs. earnings growth**. Per capita income in Valley County ranks 3rd highest among Idaho counties, but the growth in real average annual earnings per job has stalled for the last 30 years, leaving the county ranked close to the bottom in wage growth per job.
- **Multipliers**. The sales multiplier for snowmobile recreation is estimated to be 1.65. Jobs and income multipliers for snowmobiling are 30 and 0.39, respectively. In comparison, cattle ranching has the highest sales multiplier at 1.95 and FIRE (Finance, Insurance, and Real Estate) the lowest at 1.16. See Table 4 on page 6.
- **Visitor spending**. Snowmobile recreation is a high expenditure sport. People spend an average \$316 per person per trip or \$106 per person per day in Valley County.
- **Visitor trips**. Cascade snowmobile visitors average 14 trips per year and spend two days per trip. McCall attracts almost 40 percent of out-of-state snowmobile visitors, with an average distance traveled of almost 250 miles one way. McCall visitors average ten trips per year and stay three days.
- **Idaho visitors**. Sixty percent of Valley County snowmobile visitors are from Idaho, 20 percent from Washington, and the remaining 20 percent from various locations.

Table of contents

University of Idaho
College of Agricultural and Life Sciences

The 2004/2005 Valley County Snowmobile Survey

During the 2004/2005 snowmobiling season, a survey was distributed to snowmobile participants at all major snowmobile parking lots, motels, and time-share condos, snowmobile club meetings, snowmobile rental businesses, and snowmobiling events in Valley County.

All segments of Valley County snowmobile recreation were sampled. The questionnaire was a mail-in survey asking for information about travel distance, allocation of time on trip, number of vehicles and snowmobiles, demographic information, tastes and preferences, and trip costs.

Distribution began late—January 1, 2005—because record low snowfall discouraged visitation. Of the 1000 questionnaires printed and distributed, 367 surveys were returned and 350 provided useable information.

Three strategies for developing snowmobile recreation and the Valley County economy

1. Target high expenditure recreation, like snowmobiling, to grow the county's economy during winter.

2. Big ticket capital expenses are incurred outside Valley County. Businesses within Valley County need to develop strategies for attracting visitors to purchase these items within Valley County. Valley County is currently only getting a small piece of this revenue. Promotion of more and longer trips would capture more non-margined (dining and lodging) dollar trip expenses to circulate within the county.

3. Snowmobile recreation makes a vital contribution to businesses for a key short time each year (winter months) so needs to be coordinated with other winter activities to maximize contributions to the county's economy.

Also see three scenarios, page 5.

Where snowmobilers come from; how much they spend

Over 60 percent of snowmobile visitors to Valley County are Idaho residents with the rest coming from other western states. Of Idaho visitors to Valley County, the majority come from Treasure Valley (69 percent). Single day visitors make up 35 percent of the total snowmobile visitation, and 65 percent are multi-day visitors. Due to poor snow conditions, snowmobile visits dropped off during 2004 and 2005. See Tables 1 and 2.

Three main snowmobile parking lot areas correspond to the major county communities: Cascade, Donnelly, and McCall. See Chart 1 page 3.

The Cascade area is closest to Boise—about 100 miles. It is frequented almost entirely by Idahoans. Given the shorter travel distance, Cascade visitors average 14 trips per year and spend just two days per trip.

McCall, at the other end of the spectrum, attracts almost 40 percent of out-of-state visitors, with 250 miles traveled one way. McCall visitors average 10 trips per year and stay an average of three days.

Table 1. Visitor Characteristics compared for three Valley County towns.

Visitor Characteristics	McCall	Donnelly	Cascade
Distance traveled (one way miles)	249	123	101
Snowmobile distance (miles)	136	93	66
Time spent on groomed trails (%)	58%	50%	70%
Party size	6	4	5
Average trips per year	10	16	14
Visitors from Idaho (%)	62%	90%	100%
Days spent in Valley County per trip	3	2	2

Source: 2005 University of Idaho snowmobile survey

Expenditures. Expenses do not stop with the purchase of a snowmobile. Each trip requires the outlay of hundreds of dollars for gas, lodging, food, etc. Expenditure categories include capital expenses and trip expenses. See charts on page 3.

An average Valley County snowmobiling visitor spends \$106 per day, \$89 of it in Valley County. Lodging—the largest category—claims more than 30 percent of the total spent, with dining the second largest category—20 percent. McCall snowmobile visitors spend the most—\$2,651 per person per year, with \$2,492, of that in spent in Valley County (average of 7.5 trips per year at \$354 per trip).

Chart 1. Numbers of Snowmobile visitors to Donnelly/Cascade, McCall and miscellaneous other sites totaled for 2003, 2004, and 2005. *Source: UI survey*

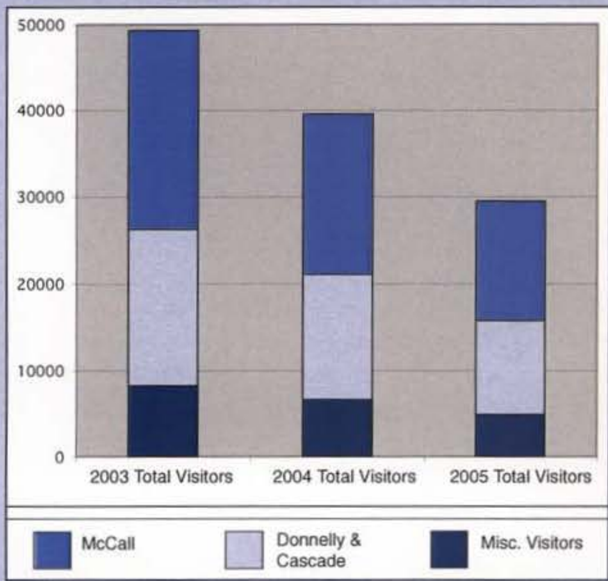


Chart 2. Annual Capital Expenses

How $2,875 in capital expenses per average Valley County snowmobile visitor is spent during a season (2003). Much of it "leaks out" to other counties. For example, not all snowmobiles used in Valley County are purchased there.

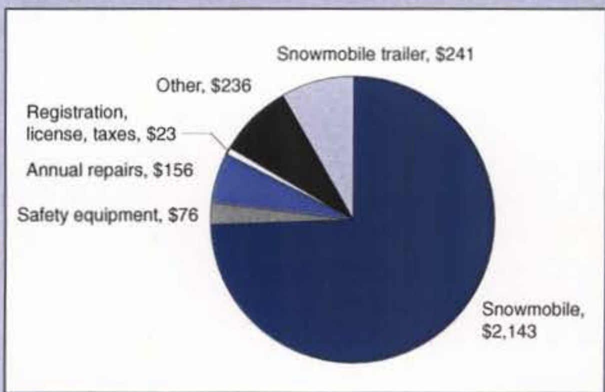
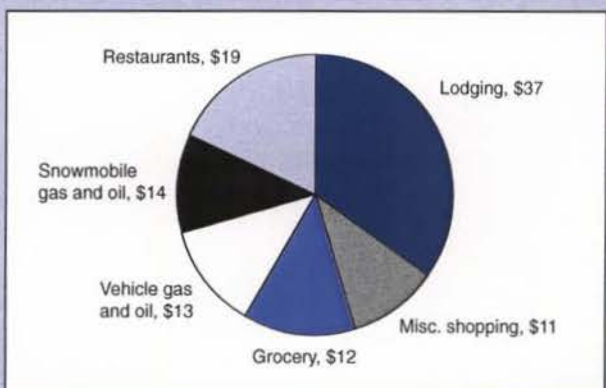


Chart 3. Daily Trip Expenses

Where $106 a day is spent per average snowmobile visitor to Valley County, $68 goes to food, lodging.



In addition to trip expenses, a visitor spends another $2,875 per year on capital outlays. These expenses are not tied to any one trip but are made for the entire year or even multiple years. In contrast to the trip expenses, only 20 percent ($571) of the capital expenses are made within Valley County.

Big ticket capital expenses and even annual costs such as registrations are incurred at home. However, registration fees do return to Valley County via the state trail grooming program. In short, the trip expenses circulate in Valley County, whereas the capital outlays circulate in other economies. See Charts 2 and 3.

Table 2. Valley County snowmobile-related visitors and money spent, 2003 to 2005.

Year	Snow Amount	Valley County Visitors Total	Total Spent in Valley County
2003	Good	50,000	$7.5 million
2004	Low	40,000	$5.7 million
2005	Low	30,000	$4.3 million

Contribution of snomobile recreation to the Valley County economy

Valley County is reported by *SnoWest* to be the fourth most popular snowmobile destination in the nation. The winter economies of McCall and Cascade depend on money generated by snowmobile recreation. Many service and retail businesses would be unable to sustain themselves without snowmobile recreation.

Many county businesses that do not sell directly to snowmobile customers supply goods and services to businesses that sell to snowmobile customers, thereby creating a rippling effect of snowmobile dollars throughout the Valley County economy. Even though there may be more visitors during the summer, winter revenues are key to maintaining year round businesses. Winter is becoming an increasingly lucrative season for the county's economy.

Assumptions. The measure of snowmobile contribution to the Valley County economy is done under several key assumptions:

- Snowmobile visitation to Valley County will be measured "with versus without" snowmobiling. "Without" means a complete ban of snowmobile use in the county. Our baseline visitation to measure contribution was assumed to be the 2003 season, the last winter with good snowfall.
- To reveal the raw economic contribution of snowmobiling, no other offsetting uses of the lands that are used for snowmobiling are assumed. If a huge jump in skiing or other winter recreation offsets a snowmobile ban, then the contribution of snowmobiling will be masked.
- Only the margined sales (wholesale, retail businesses) circulate in the economy to create the multiplier effect.

Definitions used in measuring direct and indirect recreation impacts on the economy

Economic impacts are partitioned into two levels.

The **direct impact** of snowmobiling recreation includes jobs, income, and sales that are created by the selling of goods and services directly to snowmobile customers.

The **indirect impacts** are impacts on other Valley County businesses that provide goods or services to businesses that sell direct to snowmobiling customers. Indirect impacts are the so-called "**ripple**" or **multiplier effects** of snowmobile recreation.

Snowmobile impacts are the product of the export change times the respective snowmobile multiplier. (Export change x snowmobile scenario multiplier = snowmobile impact).

Multipliers were determined from the I/O model.

Each scenario involves a set of assumptions concerning direct impact of a change in snowmobile visitation to Valley County. The assumptions translate into a change in exports—the new dollars that drive an economy.

Margins. An I/O model is defined by producer prices, not purchaser prices. For consistency in impact analysis, the change in exports must also be defined by producer prices.

Purchaser price equals the producer price plus the transportation cost plus the wholesale markup plus the retail markup. (Producer price + transportation cost + retail markup = purchaser price). Thus, the "margin" is the difference between producer and purchaser prices.

Margined businesses are wholesale and retail businesses. The other major category of tourist expenditures—lodging and restaurant—sell their goods and services at producer prices at the "factory," so are **not margined**.

Only 7 or 8 percent (the margin) of purchase price for gasoline or grocery stores stays within the county to circulate and create the multiplier effect.

Offsetting impacts. Implicit in each scenario is an assumption that the cutback or loss of snowmobile tourism will not be offset by an increase in some other recreation.

Recreation industry as export (new dollars). Recreation is not an industry but rather a category of exports. Even though the goods and services that a tourist purchases are consumed onsite within a local economy, tourist expenditures are new dollars to a local economy. These new dollars are exports that circulate within an economy to create new sales, income, and jobs within the economy.

Impacts are driven by new money that enters the economy. When a local resident spends money on snowmobile recreation, is that new money? Or exports? Or simply redistribution of the expenditures?

For example if a local resident does not go snowmobiling would he or she simply undertake some other recreational activity, say skiing?

Total visitor spending

In 2003 approximately 50,000 snowmobile visitors came to Valley County. Each visitor spent an average $148 per person per day on trip expenses. The $148 figure is higher than the $106/day listed earlier because it includes capital expenses prorated over the year by the number of snowmobile days in the county.

The total margined (wholesale and retail businesses) expenses per person per day average $79 per Valley County snowmobile visitor, for a total $3.95 million in sales that circulate in the economy, creating economic impact in jobs and income. The total unmargined sales from Valley County business made directly to snowmobile customers topped $7 million in 2003.

The contribution of snowmobiling to the Valley County economy is measured in terms of potential sales, income (wages and salaries), and jobs:

Jobs. A total 119 jobs (4 percent of total jobs in Valley County in 2002/2003) are directly and indirectly created by the sale of goods and services to snowmobile customers.

Income. A total $2.6 million in personal income for Valley County residents (1 percent of total income in Valley County in 2002/2003) is directly and indirectly made in the sale of goods and services to snowmobile customers.

Sales. A total $7.4 million dollars in unmargined sales (lodging, restaurants) is directly made for goods and services to snowmobile customers annually in Valley County.

Three snowmobile scenarios

The following three scenarios impacting snowmobile recreation summarize concerns of Valley County businesses, officials, and snowmobile enthusiasts—economic impacts of a snowmobile event; a trail or area closure; and a low-snow year.

Snowmobile economic impacts are the product of the export change times the respective snowmobile multiplier. The multipliers were determined from the I/O model (page 6). Each scenario involves a set of assumptions concerning the change in snowmobile visitation to Valley County that translate into the change in exports. All per-day costs are given in margined dollars.

Table 3. Economic impacts of three snowmobile-related scenarios on Valley County.

Scenario	Visitors Change	Direct Sales Unmargined	Direct Sales Margined	Total Sales Direct & Indirect	Total Income Direct & Indirect	Total Jobs Direct & Indirect
		(In millions of U.S. dollars)				
Snowmobile visitors/yr[1]	50,000	$7.40	$3.95	$6.53	$2.60	119
Low snow	-20,000	-$2.50	-$1.36	-$2.20	-$0.54	-47
Trail closure	-7,200	-$0.90	-$0.50	-$0.82	-$0.20	-17
New event	800	$0.23	$0.14	$0.23	$0.05	2

[1] *Figures based on winter of 2003, a good snow year*

Scenario 1. One new snowmobile event could draw 800 visitors, $224,000 in sales

The Idaho Snowmobile Association, with 40 independent local clubs throughout the state, organizes group events such as the annual fun-run or the American SnoCross Challenge co-hosted by the three Valley County clubs. This impact scenario envisions the chamber, snowmobile clubs, and local businesses promoting one additional race.

Of the 120 registered riders in the Mountain West Racing Circuit in 2005, this report assumes that 100 riders participate in the new race. Races draw not only the rider, but also mechanics, friends, race sponsors, and spectators. Five additional people attend with each rider.

Race spectators are assumed to be split evenly between day trip snowmobilers who watch the race and then go snowmobiling, and spectators who watch the race and return home. Including both the race participants and spectators, 800 new visitors will be drawn to Valley County for the weekend of racing—500 racers and their teams plus 300 race spectators. The race participants are assumed to stay three days in Valley County.

This report uses the multi-day visitor spending totals for the race participant's analysis. For 150 spectators that also snowmobile, the report assumes the day trip snowmobile visitor expenditure pattern ($48). The 150 other spectators buy a ticket ($10) and lunch ($15).

For racers and team members, the multi-day visitor expenditure pattern is $82 margined (wholesale, retail) per person per day for a three day and two night stay in Valley County. Margined sales totaling $135,000 in increased exports results from the race—racers and teams, $123,000 and spectators, $12,450.

As the increase in exports (new money coming into the economy) ripple through the economy, the total impact of the new race becomes $224,000 in direct and indirect margined sales generated in the county, two new jobs, direct and indirect, and $54,000 in wages and salaries. See Table 3.

Scenario 2. Trail closure impact: Lose 7,200 visitors, lose $832,000 in sales

This impact scenario hypothesizes the closure (or opening) of an area comparable to West Mountain. West Mountain is accessible from both Cascade and Donnelly. The majority of the West Mountain snowmobilers are single day visitors from the Boise area who choose not to drive the extra distance to McCall. If West Mountain were unavailable, many would opt for a single day to nearby Idaho City or Owyhee snowmobile sites.

Annually there are 18,000 snowmobile visitors to the West Mountain area. If the area were closed to snowmobiling, we assume that 40 percent will visit other areas outside of Valley County, and 60 percent will shift to other Valley County destinations.

Of the 7,200 that will no longer visit Valley County, 38 percent—or 2,700—are day trippers. The other 62 percent—or 4,500—are multi-day visitors with an average stay of four days. The UI survey records that a single-day visitor to Donnelly/Cascade spends an average of $48 per person per day. A multi-day visitor spends $82 (margined dollars) per person per day.

The total sales loss would be $499,000 to Valley County: $130,000 loss from day visitors and $369,000 loss from multi-day visitors. Applying the I/O multipliers, the resulting total impact (direct and indirect) on the Valley County economy would be a loss of $823,000 in sales, 17 jobs, and $200,000 in lost income. See Table 3.

Scenario 3. Impact of a low snow year: Loss of 20,000 visitors and $2.2 million in sales

The winter of 2004/2005, one of the lowest snowfalls recorded, had a severe impact upon the county's economy. Snowmobiling typically starts in late November, peaking in January when the deep snow draws large crowds. When other destinations are losing snow, Valley County has the reputation for great spring riding with February and March being premium months for county businesses.

There was a plunge of close to 20,000 visitors between the 2002/2003 winter (a typical snow year) and the 2004/2005 season (Table 2). Of the 20,000 drop in visitors, 62 percent were day visitors and 38 percent were multi-day visitors.

The day-tripper and multi-day visitor spends $48 and $82 per person per day in Valley County, respectively. The estimated total direct sales loss for the low snow year totals $365,000 from day trip visitors and $1 million from multi-day visitors, a total margined sales loss of $1.36 million.

Applying the I/O multipliers, the estimated total direct and indirect sales impact is $2.2 million. A total impact (direct and indirect) of $544,000 in personal income and 47 jobs lost result from a low snowfall year. See Table 3.

The Valley County input/output model

An Input/Output (I/O) model constructed for Valley County is used to provide an economic snapshot and an economic model of the Valley County economy for use in impact analysis. This I/O model provides an economic snapshot of the 2002 Valley County economy.

2002 Valley County economy snapshot

- Government is the largest employer at 19 percent and retail trade is second at 13 percent
- Jobs total 4,700
- Wages and salaries and proprietors' income total $231 million

The I/O as an economic model allows derivation of multipliers to estimate the potential effects of a change in exports (new money entering the county) on the entire economy—an economic impact analysis.

Table 4. Multipliers by Valley County Industry.

Industry	Valley County multipliers		
	Output	Employment	Income
Livestock	1.93	32.4	0.20
Non-professional service	1.82	29.2	0.84
Professional service	1.79	18.9	0.50
Crops	1.75	17.4	0.40
Trade	1.71	24.5	0.47
Skiing	1.68	19.6	0.36
TCU[1]	1.67	11.4	0.35
Gas	1.66	35.0	0.43
Snowmobiling	**1.65**	**30.0**	**0.39**
Groceries	1.64	25.1	0.42
Manufacturing	1.64	10.4	0.36
Dining	1.61	32.2	0.31
Lodging	1.59	29.0	0.36
Construction	1.59	15.2	0.31
Forestry	1.30	6.0	0.10
FIRE[2]	1.16	3.7	0.09

[1] *TCU is transportation, communication, and utilities*
[2] *FIRE is Finance, Insurance, and Real Estate*
Source: Figures from software IMPLAN, 2002

Multipliers indicate the degree to which exports drive an economy or the potential ripple effect from the basic export industries like snowmobiling or tourism.

An industry with a small multiplier relies heavily on imports from outside Valley County, or has large leakages. For example, the close proximity of Boise is a two-edged sword; such easy access makes Valley County a recreation Mecca, but the availability of imports from Boise increases leakages from the Valley County economy and so reduces multipliers. Cascade residents shop for groceries in Boise.

Livestock has the largest output multiplier (1.93). Non-professional services (1.82) ranks second. Livestock often has the highest multiplier because cattle require large amounts of locally grown feed. Conversely, FIRE (Finance, Insurance, and Real Estate) at 1.16 has the lowest multiplier because of high imports.

As defined in the I/O model, snowmobiling is not an industry but rather a category of exports. However, it is possible to synthesize a multiplier by taking the expenditure pattern (margined) and weighing the multipliers for the respective expenditures. The multiplier for Valley County snowmobiling is 1.65, ranking in the middle of businesses.

Interpreting the snowmobile multiplier

The snowmobile multiplier is interpreted this way: for each dollar of sales made to a snowmobile visitor, 65 cents are indirectly created through sales to non-snowmobile businesses in Valley County. Similarly, the jobs multiplier is interpreted as each million dollars of sales to out-of-county snowmobile visitors creates 30 jobs in Valley County. For each dollar of sales to snowmobile visitors, almost forty cents of wages and salaries are generated in Valley County.

Input/Output Model Definitions

A local economy has three components, all of which are necessary to create wealth, income, and jobs for residents of that economy. They include:

- **Local businesses** that buy and sell goods and services to each other (households with their labor and wages are one of those businesses);
- **Exports**, or the new money that drives the economy—an economy cannot create new wealth by doing each others laundry;
- **Imports, savings, and taxes**—inputs without which local businesses could not produce goods or services. **Imports** are goods and services that must come from outside the country to maintain local businesses.

To model the relationships among these three components, an Input/Output (I/O) model of the Valley County economy was constructed.

An I/O model is a representation of a regional economy that links simultaneous changes in the transactions among these components, to examine the affects of a change in exports on the entire economy (impact analysis).

Exports—the new money coming into an economy—set off a web of transactions as each business seeks to fulfill its customer's demands.

Successive rounds of production and demand arise because suppliers need local inputs to make and sell their outputs. These reverberations gradually wane as a portion of each round of spending leaks out to savings, taxes, and imports.

A multiplier is composed of the direct plus indirect effect. For example, an industry may be very labor intensive (the direct effect) but labor requirements from other industries (indirect effect) are very low because of high import content. The indirect effects for small rural economies are quite low because the businesses in these small economies import a huge proportion of inputs necessary to sustain production.

The greater the leakage (imports) the smaller the multiplier. Thus, multipliers are measures of self sufficiency; the greater the leakage (imports) the smaller the multiplier.

Valley County economy overview

The Valley County economy has transitioned from logging and agriculture to a service-based economy dominated by government jobs and recreation/tourism.

A demographic and economic picture of the county's economy, compared to the Idaho economy, is an important step in understanding the economic forces and the contribution and potential that snowmobile recreation makes to the Valley County economy.

Population and employment

- Population increased over 115 percent (3,600 to 7,700), growing at an average annual rate of 2.3 percent between 1970 and 2003.
- Employment increased by 200 percent compared to an increase of 155 percent in Idaho, and jobs grew at an average annual rate of 3.3 percent from 1969 to 2002. Still, the unemployment rate in Valley County is 2 to 5 points higher than in the state.
- In 2002, government was the largest employer at 19 percent, and retail trade was the second largest employer at 13 percent.

Wages and salaries

- In 1969 Valley County's average earnings per job were 87 percent of the national average; in 2003, average earnings per job fell to 53 percent of the national average.
- Growth in real average annual earnings per job has stalled for the last 30 years.
- Average earnings ranked 32nd—from highest to lowest—among Idaho's 44 counties (2003).

Three multipliers were calculated for Valley County

Sales Multiplier. The output or sales multiplier is defined as the sum of the direct and indirect sales—or output—required from all sectors of the local economy needed to sustain one additional dollar of sales to export from a given industry.

Jobs Multiplier. The employment multiplier is defined as the sum of the direct and indirect jobs required from all sectors of the local economy needed to sustain one additional million dollars of sales to export from a given industry.

Income Multiplier. Income or earnings multiplier is defined as the sum of the direct and indirect income (wages and salaries plus proprietors' income) required from all sectors of the local economy needed to sustain one additional dollar of sales to export from a given industry.

Household income and per capita income in 2002

- Valley County average household income was close to \$39,000 and ranked 9th—from highest to lowest—out of Idaho's 44 counties.
- Valley County per capita income was just over \$30,000, compared to \$25,000 in Idaho and has grown by 55 percent since 1969. Per capita income ranked 3rd—from highest to lowest—out of Idaho's 44 counties.

Despite numerous setbacks in the natural resource based economy, Valley County businesses have generated a substantial number of jobs in the last three decades. Further, businesses have been doing better at absorbing the county's increasing population into the workforce than either the Idaho or the national economy.

Despite this great track record, the real (inflation adjusted) wages and salaries have slipped by an average annual rate of -0.31 percent over the past 35 years. The decline in real wages per job raises concerns about job quality. Structural shifts in employment—from high-wage mills to low-wage services and tourist related businesses—are diminishing the quality of jobs. Low wages have been partially offset by high transfer payments (social security and other types of government payments) and retirement income.

The Authors—**Ryan Larsen**, graduate student, Department of Agricultural Economics, UI College of Agricultural and Life Sciences
Steve Hines, UI Extension Educator, Lincoln County
Garth Taylor, Associate Professor, UI Department of Agricultural Economics, University of Idaho College of Agricultural and Life Sciences

Acknowledgements
Funding for this study was provided in part by the Idaho Snowmobile Association.

Published and distributed by the Idaho Agricultural Experiment Station, Gregory A. Bohach, Director, University of Idaho College of Agricultural and Life Sciences, Moscow, Idaho 83844-2337.

Published July 2006 **\$5.00**