

# Economic Importance of Snowmobiling in Iowa

Report prepared for the  
Iowa State Snowmobile Association

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## EXECUTIVE SUMMARY

### Economic Importance of Snowmobiling in Iowa

There were 28,753 registered snowmobiles in Iowa in 2003, or 9.79 machines per thousand residents of the state.

There are an estimated 35,625 snowmobile riders in Iowa, and 12,667 snowmobiling families.

The estimated current value of snowmobiles and related assets in Iowa is over \$92 million. In 2003 expenditures on new assets were over \$26 million.

Iowa snowmobilers spend an estimated \$56.3 million per year on snowmobile equipment and activities. \$39.8 million is spent in Iowa. \$16.5 million is spent on trips out of state.

In-state snowmobiling expenditures (\$39.8 million) generate an estimated \$25.6 million in additional transactions within the Iowa economy, resulting in an estimated total of \$65.4 million in transactions or sales, \$25.4 million in personal income, and 889 jobs.

Capturing the \$16.5 million that Iowa snowmobilers spend out-of-state has the potential of providing an additional \$27 million in total transactions, \$9.6 million in additional household income, and 412 jobs.

Survey results indicate that snowmobile owners are generally better educated and have higher incomes than Iowans at large.

Snowmobiling households average 1,170 miles per year, for a statewide total of nearly 15 million miles, annually.

Iowa snowmobilers purchase an estimated 1 million gallons of gasoline, in-state, annually.

Over 85 percent of riders utilize public lands and multi-use trails.

Iowans ride an estimated 2.8 million miles per year on frozen rivers and-or streams.

On average, Iowa snowmobiling families ride 18.84 days per year in Iowa and 5.92 days out-of-state. The average out-of-state trip is 2.5 days in duration.

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# Economic Importance of Snowmobiling in Iowa

While many dread a snowy and cold Iowa winter, these are just the ingredients another group of Iowans need in order to enjoy a favorite outdoor activity. In 2003, there were 28,753 registered snowmobiles in Iowa. This was equivalent to 9.79 registered snowmobiles for every 1,000 Iowa residents.

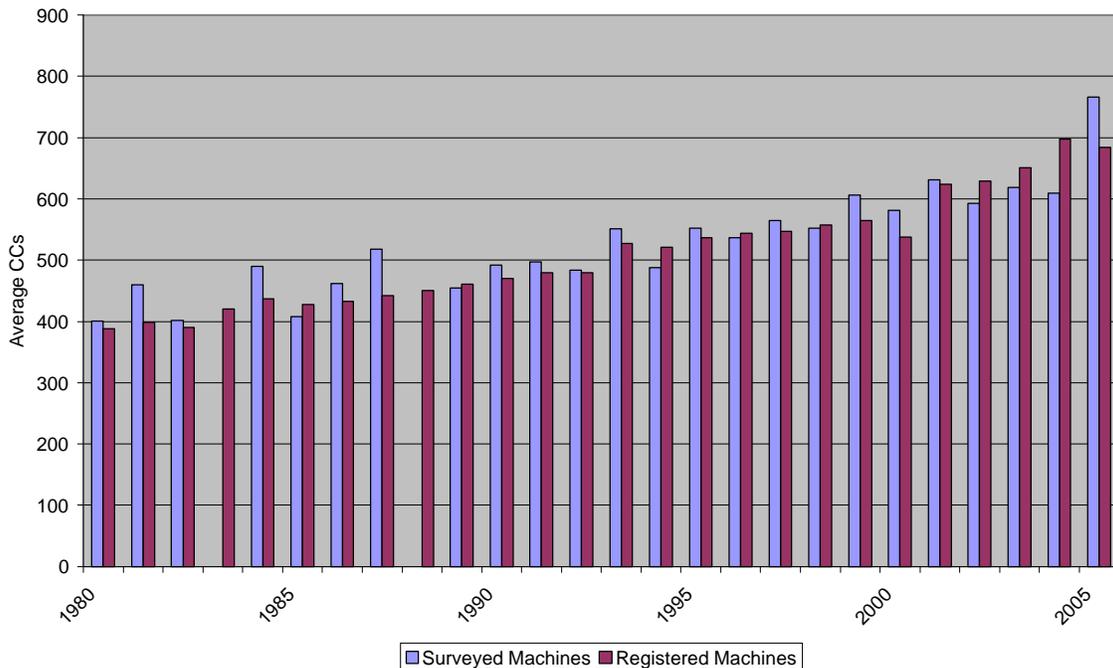
As a response to the number of snowmobiles registered in the state, the Iowa State Snowmobile Association (ISSA) is making a strong effort to increase the resources that Iowa's state and local governments invest in multi-use recreational trails and improvements. As the state increases its promotion of recreational opportunities in Iowa, it makes sense to expand the development of year-round snowmobile-accessible recreational trails. The ISSA believes that this is good for Iowa and good for Iowa's snowmobilers.

As part of this effort, the ISSA has commissioned this study of recreational snowmobile activities by Iowa residents. This study was undertaken in two parts. First, a random survey of registered snowmobile owners was completed. With information from the survey, a profile of Iowa snowmobilers was developed. This profile includes snowmobile owner and operator characteristics, snowmobile usage, investments in snowmobiles and related assets, and annual expenditures on snowmobile activities. Usage and expenditure information was designed to capture estimates of both in-state and out-of-state operations/expenditures.

For the second part of the study, the survey-based profile information was analyzed using Implan, an economic input-output model, to estimate

- How much income and employment within Iowa is related to in-state snowmobile activities by Iowa residents
- How much income and employment within Iowa could be generated by retaining Iowa resident's out-of-state snowmobile activities within the state.

Figure 1. Average CCs by Model Year



## Registered Snowmobiles

The 28,753 registered snowmobiles in Iowa have an average engine displacement of 537 cubic centimeters (cc's). This is consistent with reports that, nationwide, snowmobiles in the 500cc range are the most popular. Figure 1, which shows the average size of registered snowmobiles by model year, shows a clear trend towards bigger snowmobiles, with the range running from about 400 cc's for the 1980 model year to about 700 cc's for 2005 model year registrations.

Figure 2. Percent of Registered Machines by Model Year

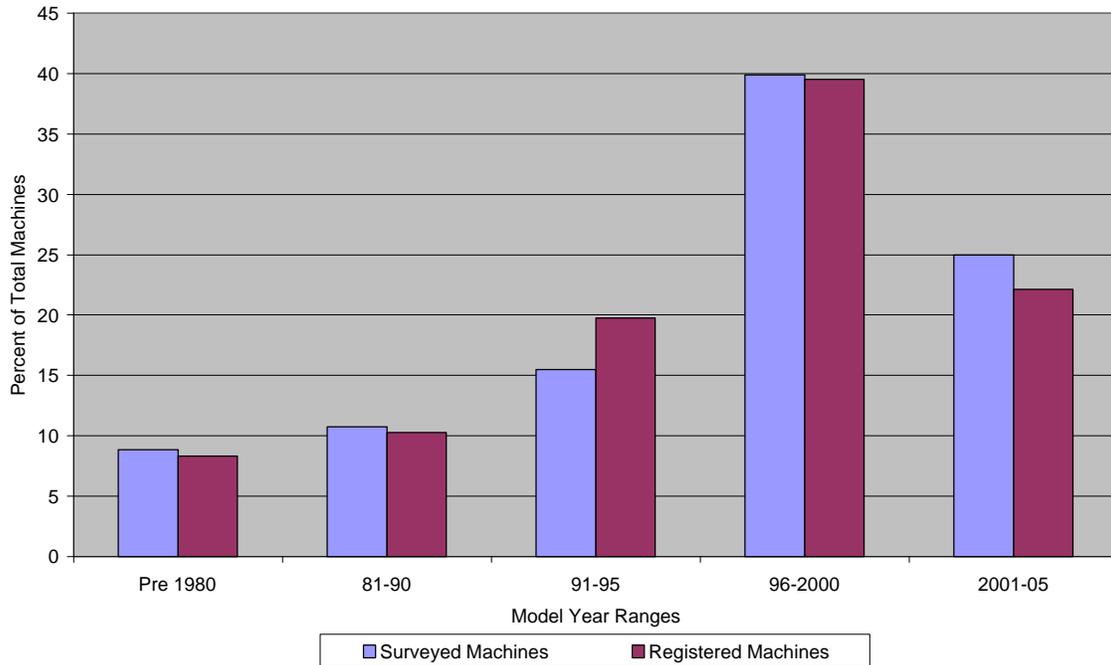


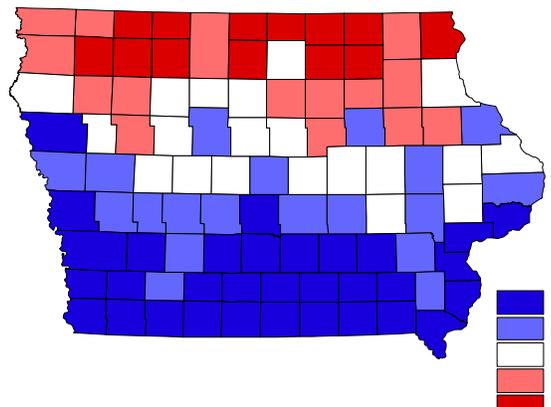
Figure 2 shows that over half of the registered snowmobiles were manufactured in the past 10 model years. Another 20 percent were manufactured in the 1991-through-1995 model years. On the other hand, almost 10 percent were manufactured in or before 1980.

As one might expect, snowmobile ownership is more concentrated in northern Iowa, as shown in Figure 3. Surprisingly, the average size of registered snowmobiles tends to be greatest in western and central Iowa. This is clearly reflected in Figure 4.

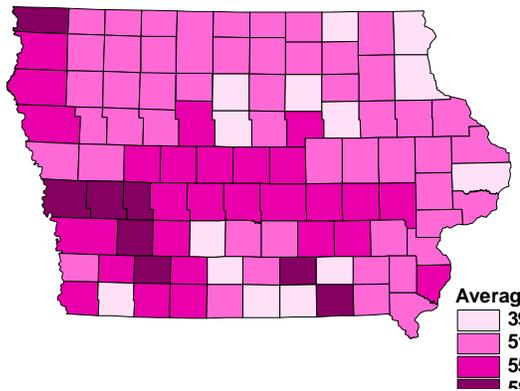
## Survey Responses

Between November 15, 2004 and January 15, 2005, a random sample of 144 registered snowmobile owners was surveyed as part of this study. Survey respondents were asked to identify all snowmobiles owned, personal characteristics, and snowmobile use, investment, and annual expense. The survey responses identified 327 snowmobiles, or 2.27 machines per responding family. This indicates that

Figure 3. Machines per Thousand People



**Figure 4. Average CCs per Machine by Cc**



there are about 12,667 snowmobile-owning families in Iowa.

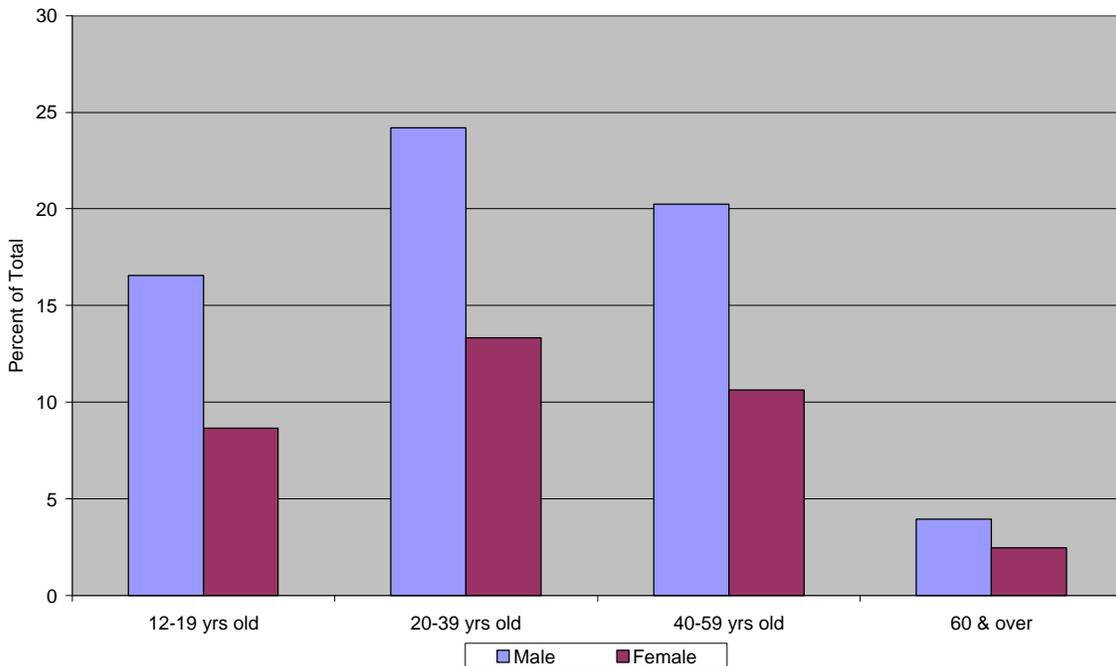
Distributions of surveyed snowmobiles by age and size are displayed in Figures 1 and 2 with the corresponding distributions of registered snowmobiles in Iowa. The distributions show that survey respondents provide a good representation of the registered population. The average displacement of survey-identified snowmobiles is 547 cc, which, again, is consistent with state registrations and national information.

Summaries of survey responses are contained in Appendices 2 through 5.

## Demographics

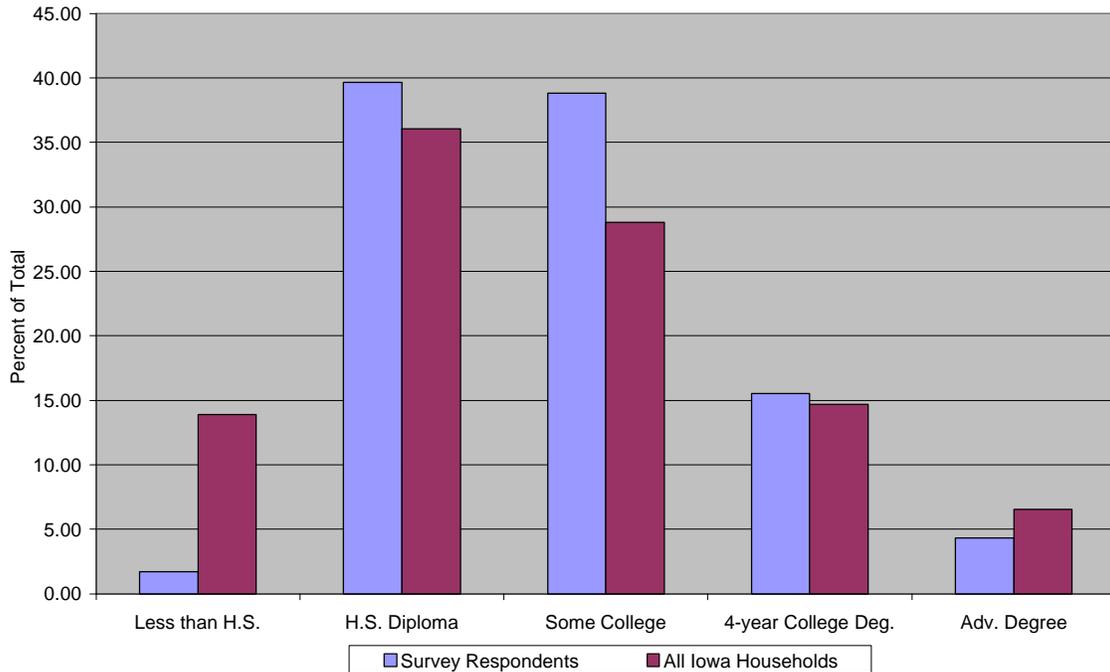
The 144 survey respondents identified 405 riders by age and sex, for an average of 2.81 riders per respondent family. This is slightly higher than the 2.27 machines identified per respondent family, and gives 1.24 riders per machine. Applying this to the registered snowmobile base in Iowa gives an estimated 35,625 snowmobile riders in Iowa.

**Figure 5. Percent of Riders by Age and Sex**



The percentage distribution of surveyed riders by age and sex is shown in Figure 5. Over all, 65 percent of identified riders are male and 35 percent are female. Over 60 percent of riders are under the age of 40. Respondents indicated that, on average, their families had owned snowmobiles for 20 years. The age distributions of individual riders identified, coupled with length of family ownership, indicate that snowmobiling is predominantly a family sport for Iowa residents.

Figure 6. Distribution of Educational Attainment



Respondents were almost evenly split by in-town and rural residences (48.2 percent to 51.8 percent). 23 percent of the rural residents reported residing on plots of 200 acres or more. 44 percent of rural respondents reside on 20 acres or less.

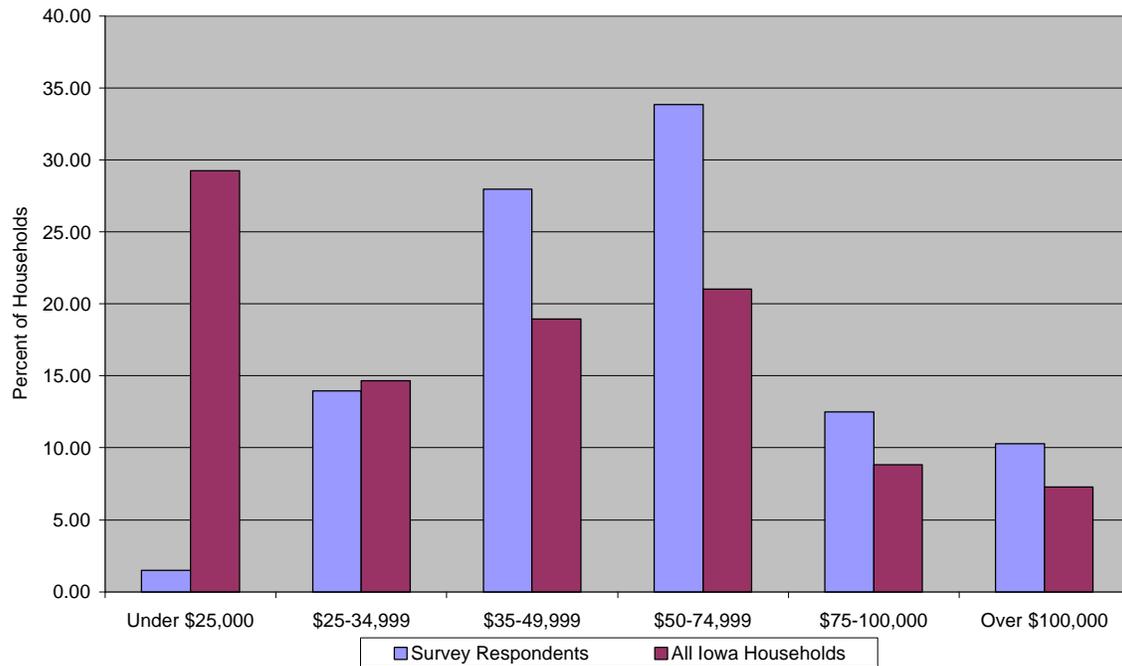
Figure 6 shows the educational attainment of those making decisions regarding household snowmobile investments and activities. Figure 7 shows the distribution of household income for survey respondents. Each figure gives comparable information for the entire Iowa population from the 2000 Census. Overall, the survey shows that snowmobiling households compare quite favorably with the entire population in terms of both education and income. Nearly 20 percent of primary snowmobiling decision makers has a four-year college or advanced degree. Less than 5 percent lack a high school diploma. The percentage of snowmobiling households in all income categories above \$35,000 exceeds that of the total population. In all categories below \$35,000, snowmobiling families are underrepresented relative to the population as a whole.

## Snowmobile Use

Surveyed households indicated that they snowmobiled an average of 1,170 miles per year. Multiplied by an estimated 12,667 snowmobiling households in the state, this gives an estimate of almost 15 million miles per year ridden by Iowa snowmobilers. This is much lower than a 1998 International Snowmobile Manufacturers Association estimate of 1,520 miles ridden per year per rider, worldwide. Some significant facts about surveyed household usage include:

- 87.6 percent ride on public lands
- 86.4 percent utilize multi-use trails
- 19 percent of riding (over 220 miles per household) is done on rivers and/or streams

Figure 7. Household Income Distribution



Given these responses, it is estimated that

- 31,208 Iowa snowmobile riders utilize public lands
- 30,780 Iowa snowmobile riders utilize multi-use trails
- Iowa snowmobilers ride about 2,786,740 miles per year on rivers and/or streams

Respondents indicate that, on average, they ride

- 24.76 days per year, total
- 18.84 days per year, in Iowa, or 76 percent of riding days
- 5.92 days per year, out of state, or 24 percent of riding days

In-state and out-of-state snowmobile fuel and fluid costs are reported in Table 1. These numbers indicate that 67 percent of miles ridden per year by Iowa snowmobilers, about 10 million miles, are ridden in-state. The remaining 5 million miles are ridden out-of-state. At an average of 10 miles per gallon of fuel, Iowa snowmobilers purchase an estimated 1 million gallons of gasoline, annually, in Iowa.

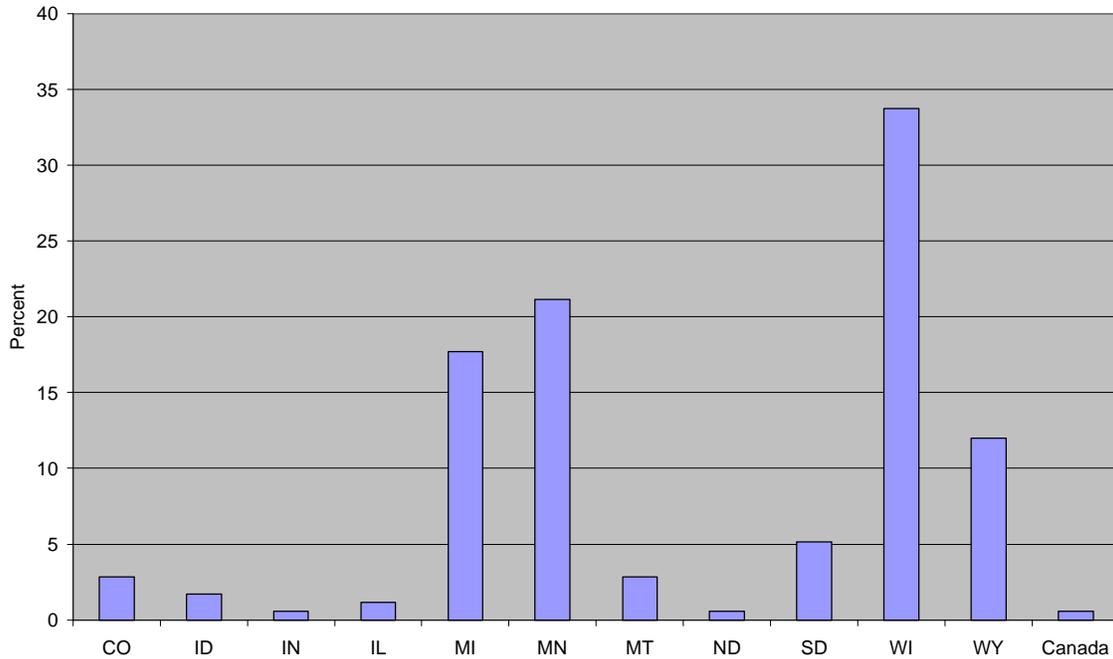
Respondents also indicate that they regularly transport their machines to riding areas and that an average of 190 miles of trails need to be available to make transporting machines worthwhile. The range of minimum trail mileage needed to justify transport ran from 10 miles (2 responses) to 1000 miles (three responses). Respondents transport their machines an average of

- 3.32 times per year to ride inside Iowa
- 2.33 times per year to destinations outside of Iowa

These numbers indicate that the average out-of-state snowmobile excursion is 2.5 days long. Figure 8 shows the percentage distribution of out-of-state destinations. Two-thirds of respondents reported snowmobiling out of state. A distribution of their reported destination states is given in Figure 8. About 55

percent of reported destinations were the border states of Wisconsin and Minnesota. Another 30 percent go to Michigan and Wyoming.

Figure 8. Distribution of Out-of-state Destinations



## Snowmobile-related Assets and Expenditures

Survey responses indicate that snowmobile owners have significant investments in their equipment. The average respondent household had snowmobiles and snowmobile-related assets with an estimated current value of \$7,283. This suggests that, statewide, snowmobiles and related assets have a current value of nearly 92.25 million dollars. These assets would include snowmobiles, trailers, covers and shelters specifically for machines and trailers, and special tools for snowmobile maintenance.

In 2003, survey respondents spent an average of \$912 per machine to purchase additional assets, suggesting total statewide new investments of over 26.2 million dollars in 2003.

Table 1 provides data obtained from the survey and provides estimates of statewide values generated from the survey. The table is organized as a grid. The rows are divided into three groups, each of which has a red heading:

- 2003 Snowmobile Operating Expenses
- 2003 Snowmobile-related Expenses
- 2003 Assets Purchased

There are also three yellow-highlighted lines, two for subtotals and one for a grand total of each column.

The columns are also divided into three groups:

- SURVEY TOTALS
- PER SURVEY MACHINE (327 or 311)
- TIMES REGISTERED MACHINES (28,753)

Each group of columns has one column, each, for

- Total
- Out-state
- In-state

The first group of columns provides totals of snowmobile and snowmobile related expenditures by survey respondents in 2003. These include purchases of snowmobiles, related assets, clothing and gear, fuel and lubricants for both snowmobiles and transport vehicles, travel expenditures to snowmobile destinations, etc. Respondents indicated the portion of expenses by category that were made in Iowa and out of the state.

To develop statewide estimates of these expenditures, the first set of columns was normalized to reflect expenditures per machine. Survey respondents identified 327 machines, so survey totals from the first group of columns were divided by 327. This was done for all of the expenditure data except for “Snowmobiles” purchased. Respondents did not identify year of purchase or purchase price for 16 machines in the pool. As a result, snowmobile purchases identified in the survey were normalized across 311 machines. These “Per machine” numbers are in the second group of expenditure columns in Table 1.

To generate the third group of columns in Table 1, each of these normalized numbers (per machine) was multiplied by 28,753, the total number of registered snowmobiles in Iowa. This provides an estimate of total 2003 expenditures on snowmobiles, related assets, operating expenses, etc. for Iowa.

The bottom line estimate is that Iowa snowmobile owners spent a total of 56.3 million dollars on the sport in 2003. 29 percent of this, or 16.5 million dollars, was spent outside of the state. Out-of-state expenditures were significantly higher for operating and personal expenditures (45%) than they were for purchases of assets (29%). The portion of out-of-state expenditures for both asset and expense items exceeds the reported portion of snowmobile activities that take place outside of the state (23.9%). This at least partially reflects the fact that snowmobiling outside of the state is more expensive than snowmobiling at home due to the costs of transporting machines, meal, lodging, etc.

Snowmobile operating expenses include an item, “Fuel, oil, lubricants, and other fluids,” that totals \$120.54 per machine (\$273.62 per family at an average of 2.27 machines per snowmobiling family) in 2003. Survey responses give an average of 1170 miles snowmobiled, annually, per family, indicating total fuel and fluids costs of about 23.39 cents per mile. This is consistent with a fuel-only (no other lubricants or fluids) calculation of 21.5 cents per mile (\$1.50 per gallon gas, \$26 per gallon 2-cycle oil, 40:1 fuel-oil mix ratio, 10 miles per gallon of gas). The consistency of these numbers provides additional confidence that survey responses are internally consistent and relevant, population-wide.

## Estimated Economic Impacts

The estimation of economic impacts was done on the basis of two scenarios. In scenario 1, the effects of snowmobile expenditures made within Iowa were evaluated to provide an estimate of impacts associated with current spending. In scenario 2, the impact of all Iowa snowmobile expenditures regardless of whether they were made in-state or out-of state were evaluated with respect to the Iowa economy to provide an estimate of the impact that would be possible if all of these expenditures could be captured inside of Iowa. For each of these scenarios, three sets of results are presented

- A. The estimated effect of expenditures on the total value of economic transactions (gross sales or total output) in the Iowa economy
- B. The estimated effect of expenditures on the overall level of household income (payrolls, wages, salaries, etc.) in the Iowa economy
- C. The estimated effect of expenditures on the number of jobs in the Iowa economy

These estimates were derived with the help of the Implan input-output (I-O) model. An I-O model is basically a matrix of a number of economic sectors. Sectors along one axis represent industrial inputs or suppliers to the industries on the other axis, which represent industrial users or demanders. Conceptually, it starts out looking like the large mileage chart in the back of a road atlas. Unlike the mileage chart, however, each of the cells in an I-O model is mathematically linked to all of the other cells by production functions. Changing the values of goods supplied or demanded by any of the industrial cells causes the model to rebalance the matrix, showing how that initial change affects all of the industries that supply inputs to or demand outputs from the industry altered. See Appendix 1 for more discussion of how an I-O model works.

The values that we used to generate our changed scenarios were taken from the last group of columns, "TIMES REGISTERED MACHINES (28,753)," in Table 1. Changes for scenario 1 came from the "In-state" column, where the grand total of all expenditures is 39.8 million dollars. Changes for scenario 2 came from the "Total" column, where the grand total is 56.3 million dollars. In each scenario, component expenditures (fuel, insurance, food, lodging, snowmobiles, assets, etc.) were entered into the demand sectors that most closely reflected these expenditures. The model was then rebalanced and the values of changes observed in 12 broad industrial categories were tabulated. These tabulations are presented in Tables 2 for scenario 1 and in Tables 3 for scenario 2. Tables 2 and Tables 3 are each a set of three tables reflecting

- The value of total transactions or total sales (2A and 3A for scenarios 1 and 2, respectively)
- The change in total household income (2B and 3B for scenarios 1 and 2, respectively)
- The change in employment (2C and 3C for scenarios 1 and 2, respectively)

that result when the model rebalances to account for the existence or absence of snowmobile-related expenditures within the state. These results incorporate the full range of linkages to the snowmobile industry including input purchases and the multiplier effects associated with consumer related purchases by people involved with providing sales and service to snowmobile owners.

Tables 2A-C present economic effects associated with the portion of snowmobile expenditures made within Iowa, as estimated from the survey results. The initial in-state expenditures of \$39.8 million are identified in Table 2A as the total "Direct" effects. These are the input to the I-O model that then rebalances to estimate the value of linkages to the rest of the Iowa economy. Table 2A shows the "Indirect" and "Induced" effects on the total value of economic transactions that result from this rebalancing. "Indirect" effects measure the value of supplies and services that are provided to the businesses providing products and services to snowmobile owners. "Induced" effects accrue when workers in the direct and indirect industries spend their earnings on goods and services in the region. "Induced" effects are also often called household effects. "Total" effects are the sum of direct, indirect, and induced effects. They are the total of transactions attributable to the direct activity that we are measuring.

Overall, an estimated \$65.4 million of gross sales transactions are directly or indirectly related to the Iowa snowmobile industry, implying an output or gross sales multiplier of 1.64 (\$65.4 million/\$39.8 million). \$10.9 million of these effects are “Indirect,” meaning that they represent the wholesale or supply transactions that support the businesses directly patronized by snowmobile operators. Nearly \$14.7 million of these effects are “Induced,” meaning that they are the result of personal purchases (the payroll-retail loop) made by the workers (payroll recipients) in the businesses that directly serve snowmobilers or support and supply those businesses.

Tables 2B and 2C show these impacts in other terms. Table 2B translates these effects from snowmobile purchases into personal or household income. The dollar values in Table 2B are substantially smaller than those in Table 2A, because personal income is only one of the components of any transaction price. Even so, Table 2B shows that the personal income component of our \$39.8 million in “Direct” snowmobile expenditures is over \$17 million. Added to \$3.7 million in “Indirect” and \$4.7 “Induced” personal income, this gives a total personal income component effect of over \$25.4 million in the form of payrolls resulting from snowmobile expenditures and the back-office transactions that support these expenditures. This implies an income multiplier of 1.49.

Similarly, Table 2C translates these expenditure and income effects into an estimate of the number of jobs in the Iowa economy that are tied to snowmobile expenditures made within the state. This estimates an total of 888 jobs (571 direct and 317 secondary jobs implying a 1.56 multiplier).

Tables 2A-C show that while the “Direct” expenditure effects are concentrated in the service and trade sectors, the rebalanced model shows effects that are widely distributed across all sectors of the economy. This reflects the interdependence of all sectors in the industrial supply chain that serves the snowmobile operator.

The results of scenario 2 are presented in Tables 3A-C. They represent the potential economic effects to the Iowa economy if all the reported expenditures by Iowa snowmobilers were to occur in Iowa. When we develop a scenario where all the spending reported by Iowa snowmobile owners occurs in Iowa, the economic impacts are substantially larger. The initial spending of \$56.3 million generates total spending of \$92.4 million in Table 3A. If this level of spending would occur in Iowa, a total of almost \$35 million in personal income (Table 3B) and 1,300 jobs (Table 3C) are supported by snowmobile expenditures.

The difference between estimates generated in scenarios 1 and 2 are rooted in the \$16.5 million that Iowa snowmobilers spend outside of Iowa. Adding this to transactions made within the state results in estimated increases of \$27 million in total transactions, \$9.6 million in personal income, and 412 jobs in the Iowa economy. Capturing the full extent of these changes would require convincing Iowa snowmobilers not only to stay in state, but also to increase their riding activities. The increased riding is necessary because riding near home is certainly less expensive than out-of-state excursions. The flip side of this is that, should riding come home but not increase, these savings would be the equivalent of additions to the incomes (reductions in the expenditures) of Iowa snowmobilers. This would also have an effect upon the economy. In short, while fully capturing this spending in Iowa is unlikely, it represents a target of economic development and tourism potential that improved snowmobile amenities in Iowa could shoot for.

## Club Memberships

49 of 144 survey respondents reported belonging to at least one snowmobile club. Of these, 20 reported belonging to the Iowa State Snowmobile Association (ISSA). Belonging to multiple clubs is common. Often, this takes the form of belonging to a local club and a regional or statewide club (like the ISSA), but multiple local memberships without regional affiliations are also common, as are regional affiliations without local participation. A list of clubs reported and the number of respondents identifying each club is found in Appendix 2.

## Respondent Comments

When asked if there was adequate reporting of snow conditions in Iowa, 30 percent of survey respondents said, “Yes,” 45 percent said, “No.” Five commented separately on the need for better snow condition reports, preferably on the internet.

Fifteen respondents (10.4 percent) commented on registration fees. One of these comments was positive, supporting increased fees, “...to improve trails.” Of the 14 remaining comments

- Two said that bike trails should be open to snowmobiling, because, “...our money helped build them.”
- Eleven indicated general dissatisfaction that the snowmobile registration money was not used for trail development and maintenance.
- One, “...will not be reporting the family’s sleds to Iowa, anymore, due to registration money not going towards snowmobiling.”

Five respondents commented that there are good trails in their areas. One of those noted that coordinated efforts of several snowmobile clubs resulted in a good local trail system. Seventy-two comments were received on need for increased trail development, trail improvement, and trail maintenance. Comments included

### Safety issues

- No steel posts in ditches
- Improved bridge crossings

### Access issues

- More connections from trails to towns (for gas and food)
- More designated routes into or through towns
- Parking at trails
- Better interconnection between existing trails
- Access to state land

### Grooming and maintenance issues

- Fall mowing of roadway ditches used for trails
- Better grooming of trails
- Clearing downed trees from stream beds and trails

### Trail location and quality

- More scenic trails
- DOT damaging trails on Highway 22
- Highway 6 at Iowa City
- Northeast Iowa

Nine respondents indicated that trails needed better marking and signage. One noted that better markings and signs would decrease trespassing problems and improve public awareness and acceptance of snowmobiles in designated areas.

Comments transcribed from the surveys are included in Appendices 3 and 4.

## Appendix 1. A Brief Discussion of I-O Modeling

An I-O model is essentially a generalized accounting system of a regional economy that tracks the purchases and sales of commodities between industries, businesses, and final consumers. Successive rounds of transactions stemming from the initial economic stimulus (such as a new plant or community business) are summed to provide an estimate of direct, indirect, induced (or consumer-related) and total effects of the event. The impacts are calculated for us using the IMPLAN Input Output modeling system, originally developed by the US Forest system and currently maintained by the Minnesota IMPLAN Group (<http://www.implan.com/index.html>). This modeling system is widely used by regional scientists in the U.S. and worldwide to estimate economic impacts.

I-O models are capable of providing many types of reports on regional data and interactions among sectors. For economic studies, several of the more important indicators are: 1) total output, 2) personal income, 3) value added, and 4) jobs. Total output for most industries is simply gross sales. For public institutions we normally include all public and private spending, all direct sales and subsidies received in order to isolate the economic value of their output. Personal income includes the wages and salaries of employees, along with normal proprietor profits. Value added is another appropriate measure of economic effects. Value added is analogous to gross regional product. It includes all personal income, plus estimates of returns to investors, and indirect business taxes paid to state and local governments. In short, value added gives us a measure of the income or wealth that accrues to individuals and governments as a result of industrial activity in an area. Jobs, the fourth measure, represent the number of positions in the economy, not the number of employed persons.

We also get detailed breakdown of this data into direct, indirect, induced, and total economic effects. *Direct effects* in this case refer to the set of expenditures made by snowmobile owners (Tables 2 and Tables 3, above). *Indirect effects* measure the value of supplies and services that are provided to the businesses providing products and services to snow mobile owners. *Induced effects* accrue when workers in the direct and indirect industries spend their earnings on goods and services in the region. Induced effects are also often called household effects. *Total effects* are the sum of direct, indirect, and induced effects. They are the total of transactions attributable to the direct activity that we are measuring.

The term *multiplier* is also often used when referring to economic effects or economic impacts. A multiplier is simply the total effects divided by the direct effects. It tells how much the overall economy changes per unit change in the direct effects (a dollar of output, a dollar of personal income, a dollar of value added, or a job). Multipliers help us to anticipate the potential change in the regional economy attributable to a change in direct activity in a particular industry. Firms with strong linkages to area supplying firms or that pay relatively high earnings may yield high multipliers. Firms that are otherwise not connected strongly locally or that pay lower than average wages will have lower multipliers. Urban areas with their more developed economies have, on the average, much higher multipliers than rural areas.

## Appendix 2. Reported Snowmobile Club Memberships

<b>Club Name Reported</b>	<b>Number</b>
Iowa State Snowmobile Association	20
Jackson County 49ers	1
Sledheads	2
Minnesota state club	1
Marshalltown club	1
Boone County High Bridge Trailblazers	1
BV Blizzard Busters	1
Sno Hawks	1
Dickinson County Snow Hawks	2
Ashbury Snowhawks	1
North Iowa Sno-Jammers	4
River Trails (Balltown)	3
Palo Alto County Rough Riders	1
Clay County Sno-Braves	1
Tricounty Snowmobile Association	2
Frozen Few Snowmobile Club	3
Eastern Iowa Snowmobile Club Alliance	1
Allamakee Sno-Blazers	2
Sno-Skimmers	1
Humboldt Sno-Skimmers	1
Drift Skippers	2
Webster County Wheurers(?)	1
Snow Pioneers	1
Winneshiek Trail Twisters	1
Winneshiek County Snow Twisters	1
Saylorville Dam Snowmobilers	1
Sac County Snow Lovers	1
Clayton County Snow Birds	2
Iowa Snow Seekers	1
North Iowa Snow Seekers	1
Southeast Iowa Ridge Blasters	1
Hancock County Snowmobile Club	1
Drift Runners Snowmobile Club	1
Cresco Drift Runners	1
Two Rivers ATV	1
Snow Drifters	1
Floyd County Groomers	1
Chickasaw County Club	1
Howard County Stump Jumpers	1

### Appendix 3. Comments on Current Iowa Trails and Policies

1. State is doing as good as possible w/ conditions.
2. better signing, w/ less trespassing results in better relations w/ public
3. see more groomed trails in Iowa when it snows
4. taking snowmobile money for other things
5. spent 5-10 times as much in year '00 & '02 w/ sport
6. ISSA did great last yr w/ getting legislation passed
7. pray for snow
8. keep snowmobiling in ditches open due to more snow
9. not happy about taking licensing fees form snowmobiles
10. more money to grooming trails
11. go out west a lot due to mountains and better trails
12. policy about riding w/ hwy traffic needs to change
13. ditch trails in this area are basically useless
14. make city snowmobiling friendly
15. our state wants us here but takes our money and doesn't put it toward better trails and grooming
16. need more trails
17. most use is pulling kids around acreage
18. DNR staff could be utilized for trail dev. On off-season
19. need more snow
20. need more trails
21. too much road ditch riding
22. trail system around great lakes dev. Good idea
23. should have trail condition phone number state-wide, updated regularly
24. place on web to check trail conditions, ISSA site is not updated regularly
25. ask DOT to stop ruining trails along Hwy 22
26. Iowa doesn't have enough snow to ride here past few years
27. agree with registration increase to improve trails
28. will not be reporting families sleds to IA anymore due to reg. money not going towards snowmobiling
29. Iowa has a long way to go before even close to MN or WI
30. more equitable distribution of groomers
31. public needs to find a different view of snowmobiling, a positive one
32. concerned that money from reg. is not going towards the sport, but gov't
33. more funding for trails and signs
34. good trail system when there is snow would attract a lot more attention
35. able to utilize bike trails because our money helped build them
36. registration fees should go into snowmobile fund for grooming trails
37. not good
38. groomers need help
39. More trails in southern Iowa
40. where are registration fees going, multi-use bike trails, better trails and regulations through towns
41. better map distribution and better marking of trails
42. where are registration fees going
43. more trails
44. better maintenance on ditches for riding, no steel posts
45. registration policies went
46. make trails more like WI
47. designate money from registration to go towards grooming trails, not non-snowmobiling activities
48. improve ditch trails if that's where they need to behave more designated routes through towns
49. more trails and improvements on them; designate snowmobile money for snowmobiling
50. more trails
51. gov't took funds from association to make up for other things in budget, not happy
52. glad they got rid of the 'flag' law

## Appendix 4. Comments on Needed Improvements to Stay in Iowa and Snowmobile

1. more snow, better marked trails, more maps
2. better signing, maps, make maps avail. via internet
3. better groomed ditches where ditch riding allowed
4. more trails in northeast IA, in bluffs"
5. trails through scenic areas and valleys, w/ town access
6. more trails
7. better maps, numbered trails, consistent signing
8. better ditches for riding due to main trail town to town
9. snowmobilers need to be more responsible about riding
10. better signing
11. more permanent trails, better connection between counties
12. more groomed trails in Northeast Iowa
13. need state support for a trail system
14. more trails running along rivers
15. more state to state trails
16. more trails that aren't ditches, and parking by trails for trailers and vehicles
17. groom trails, better maps, better town routes
18. trails in NW corner of IA, problems with DNR
19. more public acceptance and riding on bike trails
20. promote for more trails on private ground, tie more trails together
21. local bike trails should be dual purpose because our \$ helped build
22. need sno-cross tracks to race to pull in other states too
23. more trails NE of Decorah
24. more trails and areas marked for fuel
25. need state sponsored trails
26. coordinate trails to meet up and get more of them
27. trails need to connect and towns need to have some passage through
28. less trails relying on ditches, more private land trails possibly
29. Webster County needs marked trails
30. multi-use for bike trails, mow ditches
31. groomed trails to bar and other places, cleaning river of down trees
32. better groomed trails
33. state forest, more trails through private lands and timbers
34. open up state land trails for riding
35. Get a Winn. County groomer
36. no way to check road ditches being groomed or what snow cover is
37. more trails and more trail updates
38. have nice trails in Iowa, but have to go outside Iowa for snow
39. more snow
40. our area is excellent for trails - very well kept & groomed
41. make trails that aren't road ditches, need better dedicated trail system
42. more snow
43. multi-use for recreational trails are a great idea
44. make bridge crossings better
45. more shelters for stopping and warming up
46. lack of snow has really hurt; need to educate public about making and maintaining trails
47. just need more snow
48. Allow snowmobiling along Hwy 6 by-pass through Iowa City
49. Iowa doesn't have enough trails that are challenging
50. trails are good, ditch trails drift bad but can't be helped
51. less ditch trails and better access to towns
52. more trails and better trail maint.

53. trails not groomed well
54. nice trail in NC or NW Iowa that's more scenic not just ditches with signing would be nice.
55. Get trails that are not ditches
56. need more access to town for fuel and food
57. our area has a lot of groups that get together & get a good network of trails
58. Minimize ditch trails, well-marked & groomed trails, possibly double-wide
59. need more public trails
60. would like to see web-site w/ trail conditions and snow depth reports
61. conditions of trails not good, and signs are not good
62. control and get more trails
63. trails need to be kept up and groomed better
64. no trails in area, just field paths and unsafe ditches
65. don't leave the state if it has snow
66. need place on web to find snow cover depth
67. more trails through wooded areas and on state land
68. not enough trails when there is snow
69. More recreational trails in southwest Iowa become multiuse trails. Most trails do not allow snowmobiles. Construct bridges on state highway rights of way so snowmobiles do not have to cross with traffic on busy highways.

## Appendix 5. Miscellaneous Tables

### Average size (cc's) by model year

Year	Surveyed Machines	Registered Machines
1980	400	389
1981	460	398
1982	402	390
1983		421
1984	490	437
1985	408	428
1986	462	433
1987	518	442
1988		450
1989	455	461
1990	493	470
1991	498	480
1992	484	480
1993	552	528
1994	488	521
1995	552	536
1996	537	544
1997	565	547
1998	552	558
1999	606	565
2000	582	538
2001	631	624
2002	593	630
2003	618	651
2004	609	698
2005	767	685

### Distribution of machines by model years

Model Years	Surveyed Machines		Registered
	Number	Percent	Percent
Pre 1980	28	8.86	8.34
81-90	34	10.76	10.27
91-95	49	15.51	19.77
96-2000	126	39.87	39.51
2001-05	79	25.00	22.11

### Distribution of Surveyed Household's Riders by Age and Sex

Age Ranges	Male		Female	
	#	%	#	%
12-19 yrs old	67	16.54	35	8.64
20-39 yrs old	98	24.20	54	13.33
40-59 yrs old	82	20.25	43	10.62
60 & over	16	3.95	10	2.47
Total	263	64.94	142	35.06

### Distribution of Primary Snowmobile Decision Makers

Highest Level of Educ. Attained	Survey Respondents		Iowa Population Aged 25 and Over	
	#	%	#	%
Less than high school	2	1.72	263,436	13.90
High school diploma or equivalent	46	39.66	683,942	36.08
Some college	45	38.79	546,388	28.82
Four-year degree	18	15.52	278,350	14.68
Advanced degree	5	4.31	123,740	6.53

### Distribution of Household Income

Household Income	Survey Respondents		All Iowa Households	
	#	%	#	%
Under \$25,000	2	1.47	336,238	29.23
\$25-34,999	19	13.97	168,713	14.67
\$35-49,999	38	27.94	218,204	18.97
\$50-74,999	46	33.82	242,022	21.04
\$75-100,000	17	12.50	101,287	8.81
Over \$100,000	14	10.29	83,733	7.28

### Reported Out-of-state Destination

	Destination Area Reported											
	CO	ID	IN	IL	MI	MN	MT	ND	SD	WI	WY	Canada
Number of Respondents	5	3	1	2	31	37	5	1	9	59	21	1
Percent of Reports	2.86	1.71	0.57	1.14	17.71	21.14	2.86	0.57	5.14	33.71	12.00	0.57