

## EXECUTIVE SUMMARY

### **All-terrain Vehicles in Minnesota: Economic impact and consumer profile**



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***Tourism***  
**C E N T E R**

## SUMMARY ECONOMIC RESULTS

Two surveys and secondary data were used to ascertain ATV economic activity and impact. In cooperation with ATV Association of Minnesota (ATVAM) and the Department of Natural Resources (DNR), a mail survey of Minnesotan's with registered ATVs was implemented, as was a mail survey to ATV retailers and manufacturers.

<i>Direct ATV-related expenditures:</i>	\$641.9 million.
<i>Of the total residential travel expenditures (\$572.1 million):</i>	\$260.3 million spent in destination \$311.8 million spent at home and en route
<i>Economic impact of resident expenditures:</i>	Jobs: 8,756 jobs Wages and salaries: \$224.6 million Contribution to GSP: \$491.2 million Tax Revenue: \$48.9 million
<i>ATV-Related Retail activity:</i>	Jobs: 1,477 jobs Wages and salaries: \$39.2 million Contribution to GSP: \$79.3 million Tax revenue: \$6.9 million
<i>ATV manufacturing activity:</i>	Jobs: 4,216 jobs Wages and salaries: \$165.6 million Contribution to GSP: \$349.2 million Tax revenue: \$30.4 million
<i>Total state and local tax revenues:</i>	Tourism: \$48.9 million Retailer sales: \$6.9 million Manufacturing: \$30.4 million

<b>Range of Total Impacts of ATV Riding in Minnesota, 2005</b>			
	<i>Low*</i>	<i>High**</i>	<i>Average</i>
Total Employment	12,238	16,663	14,449
Wages and Salaries (millions)	\$372	\$486	\$429
Total Gross State Product or Value-Added (millions)	\$796	\$1,043	\$920
State and local tax revenues (millions)	\$74	\$98	\$86
*Sum of low range impact estimates of residential travel/nontravel and retail sales. No high and low estimates for manufacturing.			
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## EXECUTIVE SUMMARY

All-terrain vehicle (ATV) sales and subsequent recreational riding has significantly increased in the United States and Minnesota. Both sales and participation are projected to continue significantly increasing thru 2014. To date, no Minnesota specific information on ATV consumers and their economic impact exist. Given the strong presence and projected increase in this activity, such information seems critical.

This project assessed the economic impact of all ATV activity in Minnesota and profiled registered ATV riders. More specifically, the project focused on:

- (1) economic impact of ATV trips and related tourism by Minnesota residents,
- (2) economic impact of ATV manufacturing in the state,
- (3) economic impact of consumer purchases of ATVs, accessories and apparel as measured by retail sales margins (gross sales less cost of goods sold),
- (4) state government activity related to riding ATVs, and
- (5) experiences, motivations and preferences of registered Minnesota ATV recreational riders.

## METHODS

Two surveys and secondary data were used to ascertain economic activity and impact. In cooperation with the ATV Association of Minnesota (ATVAM), a mail survey of Minnesotan's with registered ATVs was implemented, as was a mail survey to ATV retailers and manufacturers.

### *Questionnaires and Samples*

The consumer questionnaire consisted of seven pages focused on questions to determine ATV riding experience, travel, expenditures, and perceptions of ATV recreation in Minnesota among a systematically selected sample of Minnesota ATV riding households. Using a modified Dillman (2000) technique, a response rate of 40.2% was achieved (n=280). Twenty-one non-respondents queried by telephone did not significantly differ on three of four select variables of interest (age, number of times riding ATVs for recreation in a typical season, riding skill level). However, non-respondents indicated statistically significant fewer number of registered ATVs ( $\bar{M} = 1.24$  for non-respondents,  $\bar{M} = 1.61$  for respondents).

The manufacturing and retail questionnaire consisted of four pages focused on total sales, employment, wages and industry supply costs both in and out of Minnesota to a list supplied by ATVAM. Using a modified Dillman (2000) technique, a response rate of 39.7% (n=98) was achieved.

## *Analysis*

Data were collected, edited and analyzed using SPSS and REMI (Regional Economic Models, Inc – an economic simulation model of the Minnesota economy). The estimates of ATV activity were entered into REMI to determine the direct (the actual activity), indirect (industry suppliers) and induced (industry employee spending) impacts on the Minnesota economy.

To estimate tourism-related expenditures for Minnesota residents, the analysis used data from the consumer survey including number of trips, expenditures during these trips, annual repair and maintenance costs, and other non-travel related expenses. Expenditure per household data were statistically extrapolated to the total number of households with ATVs and entered into REMI. The respondents were separated into two groups – those that ride both day and night, and those that ride only in the day. In addition, low, middle and high scenarios were created to provide sensitivity intervals with the middle scenario results typically cited in the text.

The manufacturing and retailer questionnaire provided the production and sales data necessary to estimate the impacts of ATV activities. These data were augmented by company information available via public reports. After removing data that may be duplicative between retailer sales and consumer expenditures and adjusting the sales data to represent only gross margins – the net contribution on the economy - the data were also statistically extrapolated and entered directly into REMI.

## **RESULTS**

### *Expenditures*

The direct expenditures of residents in Minnesota are the study's first area of analysis. Low, middle and high scenarios were statistically created to provide sensitivity intervals with the middle scenario results typically cited in the text.

For resident direct expenditures, the average household spent about \$172 per riding experience, which includes spending by riders on day trips and those including nights on their trip. This spending is equivalent to \$43 per person per day. When these dollars are combined with the number of riding experiences and other household factors results in \$641.9 million in consumer expenditures related to ATV riding, with the single highest share of costs typically going toward groceries.

Considering the middle estimation scenario of travel-related direct expenditure estimates, about 40.6% (\$260.3 million) of the total residential expenditures (\$641.9 million) are spent in the destination area within the state. The rest of the expenditures (\$311.8 million) are spent at home and en route to the destination; additional \$69.8 million are spent in nontravel expenditures (equipment, insurance, off-season storage, etc.).

## ***Economic Impacts***

***Expenditures:*** When residents use ATVs throughout the state, significant direct (expenditures or economic activity), indirect (suppliers to industry) and induced (employee spending) impacts flow into the local areas visited. In terms of total employment, resident expenditures due to ATV riding supported 8,756 jobs. Resident spending resulted in Gross State Product (GSP) impacts (i.e., contributions to the state economy) of \$491.2 million.

***Retailer Sales of ATVs and Accessories:*** Retail sales of ATVs, parts and accessories also generated economic impact statewide. This retail activity supported 1,477 Minnesota jobs, wages and salaries of \$39.2 million, \$79.3 million of GSP contribution and \$6.9 million state and local tax revenues.

***ATV Manufacturing:*** Manufacturing of ATVs, parts and accessories in Minnesota resulted in: 4,216 jobs; wages and salaries of \$165.6 million; \$349.2 million of GSP impacts and \$30.4 million in state and local tax revenues.

***Tax Revenues:*** Tourism-related activity (\$48.9 million), ATV-related manufacturing activities (\$30.4 million) and ATV-related retail sales (\$8.6 million) generated \$86 million in state and local tax revenues.

## ***State Government Activity Related to ATV Riding***

Two state government entities directly connect to Minnesota's ATV riders: the Department of Natural Resources (DNR) and Explore Minnesota Tourism (EMT).

According to the DNR, Trails and Waterways Unit, there are 1,708 miles of trails available to ATV users for the 2006 season. Of those, 706 miles are located on state forest lands and 948 miles are attributable to the Trails Assistance Program, specifically the OHV Grants-in-Aid (GIA) Program (R. Potter, personal communication, January 30, 2006). GIA trails are maintained by volunteers and, notably, the 2005 value of a volunteer hour is \$17.55 (Independent Sector, 2005).

The DNR generates revenue through registration fees and unrefunded gas tax related to ATV use which goes into a dedicated ATV Account. For 2006 the DNR Trails and Waterways Unit appropriated \$1,570,000 while the Division of Enforcement was allocated \$1,536,000 from the ATV Account for ATV specific activities. With respect to the Trails and Waterways Unit funding, \$575,000 is earmarked for GIA funding to ATV clubs sponsored by local units of government. Additionally, in the Enforcement budget \$213,000 is earmarked for grants supporting ATV enforcement efforts by local County Sheriffs (R. Potter, personal communication, January 30, 2006).

DNR progress continues on classifying Minnesota's state forest lands for ATV use. Through the end of 2005 eight forests were completed, five of which now offer ATV riding opportunities, more than doubling the miles available. The past year has seen the addition of 202 miles of new GIA trails as well, and several more projects are in the early stages of development (R. Potter, personal communication, January 30, 2006).

In addition, EMT has distributed 10,000 ATVentures Guides produced by Minnesota Sport Publishing Network (MSPN) since 2002, along with travel related information inserted in the ATV Association of Minnesota publication. These are distributed at Travel Information Centers, affiliate travel information centers, 8-10 sport shows in the Midwest and to individual inquiries for ATV information (B. Erler, personal communication, January 6, 2006).

Further, EMT has participated in the ATVAM annual conference and ride 2002-2005. Involvement includes media and promotional aspects in which the Governor participates on an ATV ride to raise awareness of recreational ATV riding, the trails that are available, and Minnesota's important connection to the ATV manufacturing industry as home to Arctic Cat and Polaris.

### ***ATV Rider Profile***

*Demographics:* Mirroring a national sample, the typical 2005 Minnesota ATV rider was a white male in his mid-forties with some college or technical schooling. The typical rider is most often full-time employed with an income greater than \$50,000 that supports a family with an average size of 2.8.

*Motivations for ATV riding:* The most important experience attribute among Minnesota ATV riders was 'being with friends and family'. 'Being in a natural area', 'relaxation', and 'getting away from it all' tied as the second most important experience attributes. Two factors explained 61.9% of the variance regarding what is important to ATV riding: riding with others in natural environments and elements of the ATV ride.

*Typical ATV riding experience:* ATV recreational riders participate in the activity about 26 times during the season, on average. Those who travel 100 miles or more for ATV riding, do so about 11 times a season. Overnight travel occurs 3.1 times a year and those who overnight stay an average of 2.1 nights per trip. A follow-up questionnaire revealed that riders under-estimated their actual riding and therefore, participation could be higher than reported here.

Survey respondents reported more than half of their ATV experiences involve distances less than 30 miles, while most of the remainder range up to 100 miles or more. The average experience was 4.2 hours in duration.

Most respondents use one to two ATVs and groups typically consist of 4 or more adults. When children or teens participate, there are usually two or more in the group. Most

often, groups include both family and friends, while about 20% of the time they include just friends, and another 23% just family.

*ATV-related travel:* Most often, ATV recreational riding takes place in the northern portion of the state. More than four of 10 respondents (47.9%) travel to the north central/west region and over a third (35.5%) travel to the northeast region.

*Desired experience improvements and willingness to pay for improvements:* ATV riders cited a series of improvements that they would like to see in the Minnesota trail system. The most frequently cited improvements included more trails as well as trail signage.

More than half of respondents supported an increase in the state trail sticker to pay for the improvements. Further, respondents were willing to pay, on average, an additional \$21 for trail improvements but the median value was less (\$10.00).

## **DISCUSSION & IMPLICATIONS**

### ***Expenditures***

Consumers reporting day and night trips typically experienced higher spending (per person and party) than day trippers. Overall, the total expenditures of ATV riders that report both day and overnight trips (\$307.9 million) is about 17 percent greater than the total expenditures of ATV riders that report only day trips (\$264.2 million). This reflects the higher average expenditure per person and per household — due to the lodging expenditures — and the higher incidence of overnight travelers.

The distribution of spending follows expected trends especially as it relates to snowmobiles where higher levels of lodging expenses and lower levels of grocery spending were found in the 2004 snowmobile impact analysis report.

The current survey was done solely on residents of Minnesota since no up-to-date information is available for nonresident ATVers. If nonresidents trends are similar to those identified in the 2004 snowmobile impact study and comprise 7.7 percent of total resident and nonresident expenditures, the resulting impacts would easily fall within the low and high range impact scenarios. This is consistent with results from a 2003 ATV study completed by the Wisconsin Department of Tourism.

### ***Economic Impacts***

The total economic impact of the ATV riding in Minnesota is broken down into the following components: resident ATV travel (home and enroute); resident ATV travel (local area); resident ATV nontravel; ATV retail sales; and ATV related manufacturing. The extrapolation methods utilized three statistically-generated scenarios for expenditures and ATV-related retail sales; ATV-related manufacturing survey results were limited and results represents actual data from

surveys or data estimated from publicly available business records without any extrapolation or alternate scenarios.

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ATV-related retailer sales represented the smallest share of overall impacts while resident expenditures (travel and nontravel related) about half. The impacts have been adjusted to account for possible duplication between consumer expenditures and retailer sales. These impacts are higher than the impacts identified in a similar analysis done on the snowmobile industry in 2004 for several reasons with the longer ATV season which allows for more riding experiences accounting for most of the difference.

### ***Consumer Profile***

The 2005 registered ATV rider in Minnesota mirrors both national and state statistics in that they are a middle-aged non-Hispanic White male with less than a college education. These results are consistent with ATV profiles from Wisconsin (2004), Colorado (1999), and Utah (2001). In terms of national studies, Minnesota’s ATV recreational riders most closely mirror Cordell’s ‘middle-age actives’ segment in terms of age and participation.

Similarly, the typical recreational riding experience and ride were comparable to other states’ findings in terms of numbers and length as well as travel party. The social nature of the ATV experience is apparent as family groups or groups of family and friends ride together in groups of about four. However, a follow-up questionnaire revealed that riders participated more times per month than they intended. Therefore, participation estimates may be under-reported. Such participation is important as the trail planning process ensues and use is estimated.

National data indicates that this ‘boomer’ has specific desires for novelty (National Travel Monitor, 1998), family accommodations (Chon & Singh, 1995), as well as flexible opportunities that include educational, cultural, or sport experiences (Cato & Knustler, 1988). Therefore, experience planning and marketing should focus on the opportunity for novel experiences for the whole family that enrich other elements of their lives. ATVAM can consider using these elements in marketing membership, as well as a minority (10%) of respondents were club members.

Important attributes of ATV recreational experiences reflected include those found in other outdoor recreation activities: being with others, being in a natural environment and getting away

from it all. Unlike other recreation experiences, however, elements of the ATV ride experience also emerged as important. In particular, access to intensive use areas with a variety of terrain and ability to ride to destinations were important. Information emerged as important: specifically, area maps and signs indicating trail users and length were important.

Trail improvements focused on greater trail quantity, quality and access, again comparable to other states. The willingness to pay for these trail improvements ranged, but perhaps the most acceptable price to pay is about \$10. Further research to understand 'quality' trails and experiences among ATV riders would be advantageous given the current planning time frame for MN ATV trails. In addition, understanding riding patterns and potential changes in these due to additional trail supply will enhance recreation planning for this activity as it booms in the next decade. As the majority of respondents ride primarily in northern Minnesota, any changes in access will immediately impact this area with possible affects across the rest of the state. While fewer than 10% of respondents indicated they ride in Wisconsin, onsite research in northwest Wisconsin (WDOT, 2004) revealed about 24% were from Minnesota. Notably, one-third of respondents were willing to travel more than 100 miles for an ATV experience.