

MOTORIZED RECREATION IN PENNSYLVANIA

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Abstract.—Pennsylvania's Department of Conservation and Natural Resources (DCNR) has been developing management plans to deal with the growing popularity of motorized recreation in the Commonwealth. Two important segments of off-highway vehicle use in Pennsylvania involve all-terrain vehicles and snowmobile riding. A pair of needs studies for these recreationists provides a unique opportunity to compare and contrast their needs and activities. While there are many similarities between the two, snowmobiles have a longer history of activity, which is reflected in the availability of trails. Consequently, snowmobile riders express the greatest needs in terms of trail system maintenance. Conversely, ATV riders have fewer places to ride and identified new trails as their principal need.

1.0 INTRODUCTION

Motorized recreation is growing in popularity in Pennsylvania as well as in the rest of the United States. A pair of studies of the recreation needs of two motorized audiences offers a unique opportunity to compare and contrast two of the principal groups involved in these activities—snowmobile and all-terrain vehicle (ATV) riders.

This paper will examine the differences and similarities in the needs and characteristics of these two audiences. Contrasts will be presented only where they were both statistically significant and substantive.

1.1 Background

Pennsylvania has one of the largest rural populations in the U.S. Motorized recreation is an important activity in the state. Between 1990 and 2003, the number of participants grew by 50 percent from 1 million to 1.5 million people (PA Department of Conservation and Natural Resources 2004). Only wildlife viewing registered a greater increase during this period. Over 600,000 people identified themselves as ATV riders,

while 400,000 indicated that they had ridden a snowmobile during 2003.

Act 68 of 2001 amended Chapter 77 of the Pennsylvania Vehicle Code to allow the Department of Conservation and Natural Resources (DCNR) to better regulate the use of ATVs and snowmobiles in Pennsylvania. In conjunction with this amendment, the Snowmobile and ATV Advisory Committee (SAAC) was created to advise DCNR on snowmobile and ATV recreation. Almost 174,000 ATVs and 46 thousand sleds were registered in the Commonwealth in 2003.

2.0 PROCEDURES

The two audiences were surveyed using a modified Dillman protocol (Dillman 1978). A six-page survey accompanied by a pre-addressed, postage-paid return envelope was sent to 3,000 ATV owners using a mailing list provided by DCNR during the first week of October 2003. Non-respondents were contacted two weeks later with a postcard reminder and again, two more weeks later with an additional mailing containing another copy of the survey. A similar procedure was followed for snowmobile owners, with the first mailing going out in September 2005.

3.0 RESULTS

A total of 1,357 usable returns was obtained from ATV owners (Lord et al. 2004). Net of undeliverable addresses, a response rate of 47 percent was obtained. Registered snowmobile riders returned 1,410 surveys for a response rate of 48 percent, net of undeliverables (Lord et al. 2006). In each case, the high response rate was credited to the quality of the mailing lists provided by DCNR and to the direct interest of the survey audience.

3.1 Rider characteristics

The average snowmobile household had 2.5 sleds and 2.8 riders, as compared to 1.6 ATVs and 2.5 riders in ATV households. Snowmobile households were more likely to have family incomes over \$50,000 than were ATV households (70% vs. 57%) (Figure 1). Both audiences, however, had a bimodal age distribution with a main peak in the 40 to 49 year age range and a minor peak in

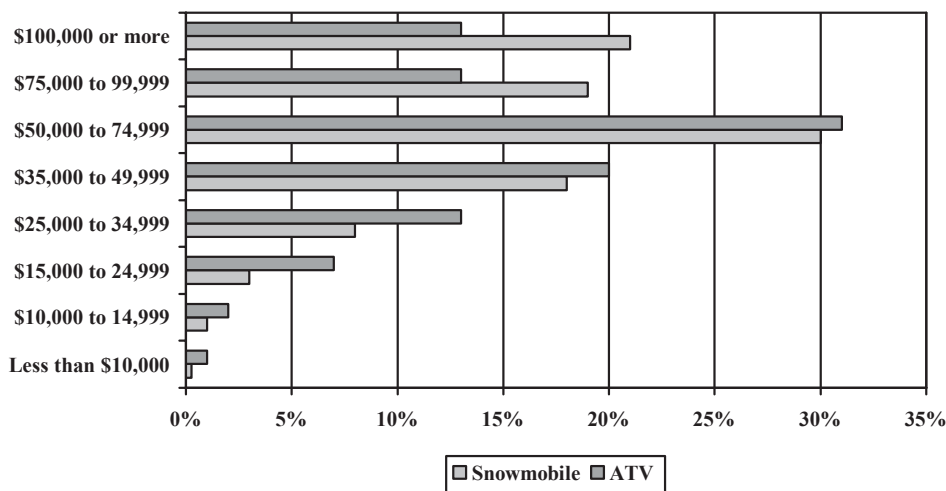


Figure 1.—Family income profiles of ATV and snowmobile households in Pennsylvania.

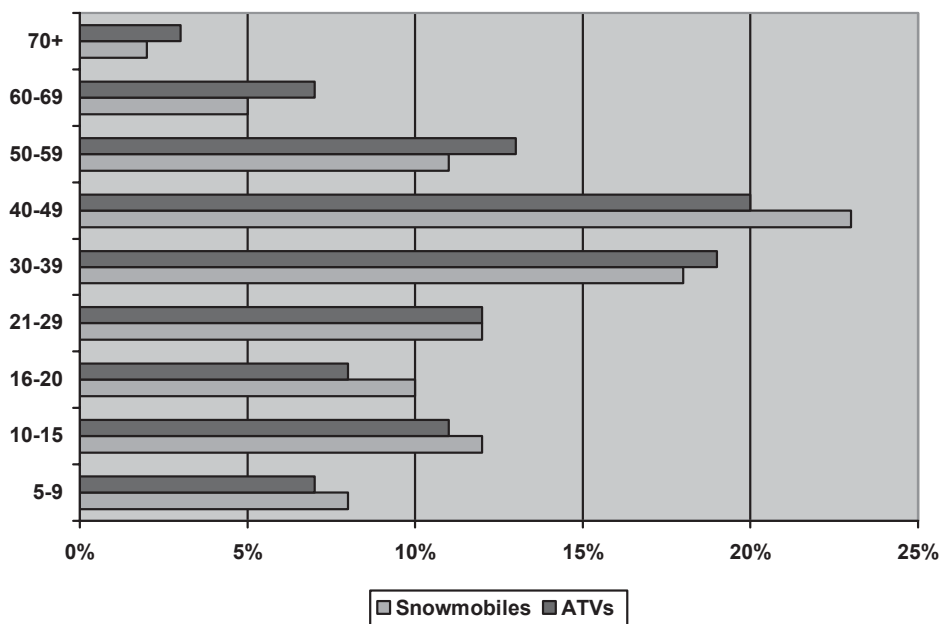


Figure 2.—Age profile of snowmobile and ATV riders in Pennsylvania.

the 10 to 15 year age range (Figure 2). This pattern was interpreted as an indicator of the family orientation of this activity for many users.

Perhaps reflecting the longer time their machines have been available, snowmobile riders had more years of experience. The median was 20 years for snowmobile owners and 9 years for ATV owners. One-quarter of snowmobiling owners had over 30 years of experience, as compared to 16.5 years of experience for ATV owners. At the other end of the spectrum, one-quarter of snowmobile owners had at most 8 years of experience, contrasting with less than four years for ATV owners.

The respondents were asked to identify the activities they participated in using their machines (Figure 3). ATVs were much more likely than snowmobiles to be used for hunting (58% versus 6%) and for utility and work (61% vs. 6%). ATV riders were less likely than snowmobile riders to identify themselves as participating in aggressive trail riding (21% versus 34%) or in sport riding (32% versus 42%).

When asked if they or family members had ever been involved in an accident with their machines, snowmobile riders had much higher incident rates than did ATV riders (Table 1). Respondents who owned snowmobiles

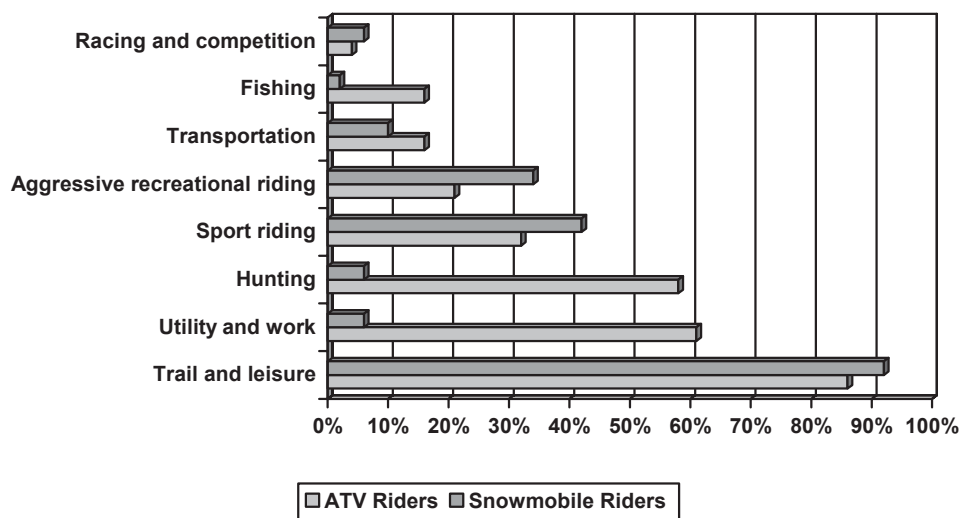


Figure 3.—ATV and snowmobiling activities in Pennsylvania.

Table 1.—Incidents while riding snowmobiles and ATVs in Pennsylvania

	ATV riders		Snowmobile riders	
	Respondent	Household Member	Respondent	Household Member
Overturn	29%	19%	42%	29%
Collision w/obstacle	17%	14%	25%	18%
Collision w/vehicle	3%	3%	6%	4%
Loading/unloading	2%	2%	3%	2%

reported more overturns (42% vs. 29%), collisions with obstacles (25% vs. 17%), collisions with vehicles (6% vs. 3%), or accidents while unloading (3% vs. 2%). Reported incidents among household members followed a similar pattern, but were noticeably lower than what the respondents reported for themselves. For example, only 19 percent of ATV respondents reported that a member of the household had an overturn (vs. 29% of respondents) and 29 percent of snowmobile household members were reported to have had an overturn (compared to 42% of respondents).¹

ATV owners were much less likely to be a member of a riding club or organization (8.5% of respondents) than snowmobile owners (45% of respondents), perhaps

reflecting the success of snowmobile groups in organizing networks of trails across private lands and the length of time snowmobiles have been around.

3.2 Needs

The two user groups' responses to questions about their recreation needs reveal the current status of trail systems available to each group (Table 2). Of primary importance to ATV owners was the establishment of new trails, with 79 percent ranking it as important or very important on a five-point scale. Maintaining existing trails fell lower, with 73 percent ranking it as important or very important. While snowmobile riders felt that new trails were important (74%), they had greater needs for trail maintenance (90%), grooming (84%), and snow left alongside dual-use roads (78%).

When asked about the length of trails they prefer, both groups attached primary importance to long trails

¹The author reflects upon his own youth, when he never told his father about any negative incident unless absolutely unavoidable.

Table 2.—ATV and snowmobile needs in Pennsylvania - trail amenities

Snowmobile	ATV
Maintain existing trails – 90%	New trails – 79%
Trail system enhancements – 86%	Trail system enhancements – 75%
Trail grooming – 84%	Access to secondary roads – 74%
Access to secondary roads – 84%	Maintaining existing trails – 73%
Snow along side roads – 78%	Support facilities – 56%
New trail systems – 74%	Increased maps, signage – 56%
Access to pipelines – 74%	Increased trail safety – 50%
Access to services – 73%	Trails with camping areas – 43%
Increase maps/signage – 70%	Camping areas at trailheads – 38%
Increased trail safety – 57%	Access to communities – 35%
Support facilities – 54%	
Increased law enforcement – 27%	

(68% of snowmobile riders and 60% of ATV riders). However, snowmobile riders' responses indicated that they were more used to traveling to ride than were ATV owners. Snowmobile owners did not rate trails close to home as highly as did ATV owners (84% vs. 74% important or very important). Snowmobile owners ranked weekend opportunities higher than day trips (67% vs. 56% important or very important), while ATV owners reversed the order (day trips—60%; weekend opportunities—50%).

3.3 Tourism

Questions about travel habits and expenditures show that snowmobile riders were more likely to travel in search of snow and riding opportunities than were ATV owners. Snowmobile owners average 4.3 day trips and 3.0 overnight trips out-of-state, while ATV owners reported 1.4 day trips and 1.1 overnight trips outside of the Commonwealth. These results then reflected in their annual gasoline purchases. Snowmobile owners reported buying an average of 84 gallons while out-of-state for their sleds and another 118 gallons to transport them while ATV owners indicated an average of 12 gallons purchased out-of-state for their machines and another 36 gallons to transport them.

The average trip out of state for ATV riding cost \$500 per household. Snowmobile owners reported expenditures of over \$900 per household (Table 3). With the exception of miscellaneous expenses, snowmobile riders had higher trip expenditures

in every category. This trend continues with annual equipment purchases, where snowmobile riders spent an average of \$4,000 on vehicles, while ATV riders averaged \$3,000.

4.0 SUMMARY AND CONCLUSIONS

The two groups, while similar in many ways, displayed some distinct differences. Many of the differences seemed to be related to the length of time their activity had been established and the cost of participating, including the proclivity of snowmobile riders to travel in search of better snow.

Demographically, snowmobile owners tended to have higher incomes and have more experience in their sport. It was speculated that the latter contributed to the higher number of accidents reported by snowmobile riders. They also tended to own more machines than did the ATV owners. Both groups had strong family-related

Table 3.—Average snowmobile and ATV expenditures for out-of-state trips

Expense	Snowmobile	ATV
Gasoline or oil for snowmobile/ATV	\$166.13	\$45.12
Gasoline or oil for vehicle	\$175.31	\$124.95
Repairs or maintenance	\$64.52	\$30.64
Food	\$185.99	\$112.47
Lodging	\$248.27	\$161.23
Fees	\$76.29	NA
Other	\$16.23	\$27.54
Total	\$932.74	\$501.95

demographics. ATV owners were less likely to be a member of an associated organization or club.

The concerns of snowmobile owners were centered around trail maintenance and grooming issues. Many of their trails involve joint use roads, so snowplowing and the amount of snow left on the side of the road are concerns for them. ATV riders, on the other hand, are much more concerned with the number and location of trails available for their use.

Finally, these results demonstrate the need to differentiate between the needs of the various segments of the off-highway vehicle audience. The differences highlighted above show that ATV and snowmobile riders have distinct needs in terms of trail features and amenities. It is important that managers treat each segment of the off-highway vehicle audience as a unique group with their own distinct characteristics.

5.0 REFERENCES

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