Michigan Mountain Biking Association
Marketing Research

Prepared for

Michigan Mountain Biking Association

By

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Central Michigan University

July, 2002

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Todd Scott, President
Michigan Mountain Biking Association
4217 Highland Rd. PMB 268
Waterford, MI 48327

Dear Mr. Scott:

The accompanying document, titled *Michigan Mountain Biking Association, Marketing Research,* contains a summary of the findings of a student research project to develop a profile of the typical mountain bike enthusiast. The report is composed of a complete description of the purposes and objectives, the research methods, and the findings of the investigation. The research was designed in accordance with your wishes, as specified in the proposal submitted earlier.

All possible steps were taken by the student researcher in completing the study to utilize the most appropriate methods and procedures as possible. The sample consisted of 224 mountain bikers drawn from an Internet population. We believe the results to be reliable and valid within the constraints identified in the report.

The data provided by the respondents offered rich and significant insights into the profile of the typical mountain bike enthusiast. We trust that you will find their information useful in your organization's further endeavors.

Thank you for the opportunity to conduct this study.

Sincerely,

Barry G. Tiedeman
Graduate Student

Executive Summary

This report presents an analysis of the typical mountain biking enthusiast. The project was completed for and submitted to Todd Scott, Terry Ritter, and Danielle Bennett of the Michigan Mountain Biking Association (MMBA) by Barry Tiedeman, Central Michigan University graduate student with the advisement of Dr. JoAnn K. Linrud, Chair of the Department of Marketing and Hospitality Services Administration, during the 2001-2002 academic school year. The information presented in this report details the background of the study, purpose and objectives, the research methods, and the results of the study.

The MMBA is a non-profit organization devoted to promoting responsible mountain biking and to working toward the goals of common land access and natural resource protection. They desired to increase membership in order to advance its objectives of greater financial and volunteer resources and expanding state bike paths. Membership, at least 1500, had been stagnant since 1997.

The MMBA contacted CMU to conduct a business plan to achieve the objectives discussed in the previous section. This study was to provide the necessary background information for the business plan centered around developing a profile of the typical mountain biking enthusiast.

The following objectives guided the research investigation.

1. To create a description of the typical mountain biking enthusiast.
2. To measure the mountain biker's level of involvement in mountain biking.
3. To determine a profile of bike owners and purchasers.
4. To determine the level of awareness and interest in the MMBA and its activities.

This investigation employed descriptive research, through the use of both primary and secondary data. Secondary data were used to provide background information and extend knowledge in the area of mountain biking. This information came primarily through journal articles and mountain biking-related Internet sites. Primary data were collected through a survey instrument posted on the Internet. The relevant population for this study was bike owners and users who had at least some level of interest in mountain biking. These individuals were found through biking-related Internet sites. The sample consisted of 224 individuals from this population.

Demographically, respondents tended to be relatively young; 69 percent of the sample were in the 20-29 and 30-39 age groups. They were also well educated and had higher incomes; 70 percent had received a post secondary degree and 67 percent maintained a pre-income tax annual salary of $60,000 or higher. The majority of respondents, 69 percent, also lived in a household comprised of two to four people. Males dominated, comprising 88 percent of the sample.

The majority of respondents stated they had been riding between two and ten years, which corresponds with the rise in popularity of the sport that began in the early nineties. Respondents rated themselves as possessing "high intermediate" riding abilities. Half of the sample indicated that they rode two to four times a week. Bikers did not travel far in order to ride; the average distance was 14.5 miles. People did not ride alone, instead, most frequently rode in groups of two to four.

Most respondents indicated that health factors, excitement and/or the thrill, and being outdoors were the most important benefits they received from biking. Respondents' active lifestyles extended beyond mountain biking. The most popular of these activities were road biking and hiking. Respondents had a moderate rate of advocacy activities. Almost half of the sample participated in trail maintenance and one-fourth provided donations or performed lobbying.

Nearly half of participants were members of at least one mountain bike-related organization. Of these, 55 percent belonged to multiple organizations. These people typically belonged to a national organization, like the International Mountain Biking Association, and a local club. Ten percent of the sample were members of the MMBA and fifteen percent described themselves as being members of the IMBA. Fifteen percent also stated they were members of a local organization.

Mountain biking is an equipment-dependent sport and, as such, riders own multiple bikes, most between two and four. The most preferred types were hard tail, road bikes, and full-suspension. Specialized and Trek were the two most popular bike brands among respondents. The average amount spent for a respondent's last bike was $1,859, with $773 spent on equipment and accessories last year. The cost prompted people to perform research before purchasing bikes, components, and tires. This information was gathered mostly by asking other riders. Other popular research sources were bike shops, the Internet, and company materials.

Three issues considered to be very important to respondents were building and maintaining trails, promoting a positive image of mountain biking, and limiting environmental damage. A third of the sample was familiar with the MMBA. Most individuals were moderately familiar and rated it as being moderate to strong in terms of its performance on advocacy concerns. Participants familiar with Michigan's trail system considered it to be very good. Over half of the sample indicated a strong interest in joining an organization with the key characteristics of the MMBA.

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Background

The MMBA is a non-profit organization devoted to promoting responsible mountain biking and to working toward the goals of common land access and natural resource protection through interaction with policy makers, the cycling industry, race promoters, mountain bikers and other trail users. The main activities of the organization are to create and maintain bike paths across the state and organize race events.

In January of 2002, MMBA's membership stood at approximately 1500 members. The organization desired to increase its membership in order to advance its objectives. These objectives included providing the organization greater financial and volunteer resources and expanding bike paths in Michigan. In the past, active recruiting was not a major priority because membership had been rising at a steady pace. This trend ceased around 1997; growth has been relatively flat since.

Purpose

The MMBA contacted CMU to conduct a business plan to achieve the objectives

discussed in the previous section. This business plan would be based upon secondary and primary research gathered by the student researcher. The plan would also contain a media plan completed by the MKT 410 Advertising Strategies class during the spring semester of 2001-2002.

The purpose of this study, therefore, was to provide necessary background information for the business plan. That information would center around developing a profile of the typical mountain biking enthusiast.

Objectives

Specifically, the following objectives guided the research investigation.

1. To create a description of the typical mountain biking enthusiast.
2. To measure mountain bikers' levels of involvement in mountain biking.
3. To determine a profile of bike ownership and purchases.
4. To determine the level of awareness and interest in the MMBA and its activities.

Research Methods

Research Design

This investigation employed descriptive research, through the use of both primary and secondary data. Secondary data were used to provide background information and extend knowledge in the area of mountain biking. This information came primarily through journal and newspaper articles and mountain biking-related Internet sites (see summary of secondary data, Appendix D). Primary data were collected through a survey instrument posted on the Internet.

Sampling Plan

The relevant population for this study was bike owners and users who had at least

some level of interest in mountain biking. These individuals were found through biking-related Internet sites. Data were collected between December 11, 2001, and January 26, 2002. That the collection period occurred during the holiday season was not perceived to have a significant impact on the results. Those questions regarding purchases would have been most affected and, because holiday shopping for most consumers may have been completed by the beginning date of this survey, it should have had little impact. In fact, since any related purchases may have been made close to the survey dates, participants probably had a more accurate idea how much they spent on biking equipment. The resulting sample consisted of 224 individuals. The demographic composition of the respondents, to be discussed later, matched national levels.

Data Collection Form

The information needs addressed in the objectives provided the basis for constructing a data collection form. It contained combinations of closed- and open-ended questions, and consisted of the following sections: (1) riding characteristics (habits, skill level, benefits, etc.), (2) product/brand preferences and purchasing research trends, (3) club affiliations and advocacy activities/attitudes, (4) awareness and interest in the MMBA, and (5) demographics. The questionnaire was reviewed and approved by faculty members at CMU. The survey instrument appears in Appendix A.

Data Collection

Administration through the Internet was chosen over a traditional mail survey because it could provide an acceptable response rate given the time limitation and the specific target population. The questionnaire was placed on a specially created Internet site, and therefore was self-located and self-administered by the participants. Invitations to participate were posted on several mountain biking-related Internet message boards and newsgroups. A complete listing of those Internet sites is located in Appendix C.

Data Analysis

All 224 surveys were recorded in an Excel spreadsheet immediately after the respondents clicked the 'submit' button after completing the survey. This procedure automatically converted the closed-ended questions into predetermined codes. Open-ended questions were edited based on similarity in respondents' answers and recorded in the verbatim responses report (see Appendix E).

The data were analyzed with standard statistical methods, using SPSS statistical software. Responses were tested to determine whether there were significant differences in responses to survey items across years, skill levels, purchasing habits, and other demographic information. Questions requiring categorical responses were analyzed with Chi-square tests, and questions with numerically coded responses were analyzed with either t-tests or one-way analysis of variance (ANOVA) with Bonferroni's multiple comparison procedure. An annotated survey appears in Appendix B.

Findings

The following paragraphs present the findings of the study, beginning with a description of the sample. Thereafter, findings for each objective are presented in detail.

Description of the Sample

The sample for this study consisted of 224 persons identified as bike owners and users with at least some level of interest in mountain biking. These responses were obtained through Questions 23 – 30; the sample characteristics are presented in Table 1 below.

Table 1
Description of the Sample

Category	Number	Percent	Category	Number	Percent
Age			Degree		
13 - 19	17	7.9	High School	56	26.2
20 - 29	64	29.8	Associates	36	16.8
30 - 39	84	39.1	Bachelors	90	42.1
40 - 49	35	16.3	Masters	19	8.9
50 - 59	14	6.5	Doctorate	13	6.1
60 - 69	1	0.5	Total	214	100.0
Total	215	100.0			
Gender			Household		
Male	190	88.0	1 Member	41	19.1
Female	26	12.0	2 Members	62	28.8
Total	216	100.0	3 Members	43	20.0
			4 Members	43	20.0
			5 Members	15	7.0
Income			6 Members	5	2.3
No Income	7	3.5	7 Members	4	1.9
$ 1 - 29,999	20	10.0	9 Members	1	0.5
$ 30,000 - 59,999	67	33.5	10 Members	1	0.5
$ 60,000 - 99,999	60	30.0	Total	215	100.0
$ 100,000+	46	23.0			
Total	200	100.0	Residence		
			Michigan	56	28.9

Respondents tended to be relatively young; 69 percent of the sample were in the 20-29 and 30-39 age groups. They were also well educated; 74 percent had received a post-secondary degree. This education level is significantly higher than the national average. According to the 2000 U.S. Census, 26 percent of Americans aged 25 and over had completed a bachelor's degree or more (U.S. Census, 2000). The state level in Michigan is slightly lower at 23 percent. Fifty-three percent maintained a pre-income tax annual salary of $60,000 or higher. The majority of respondents, almost 69 percent, also lived in a household comprised of two to four people.

Another significant distinction among mountain bikers was the issue of gender. Males dominate the sport, reflected in the sample with an 88 percent representation rate. Twenty-eight percent of respondents resided in the state in Michigan. A complete listing of all residence locations can be found on the verbatim response report (Appendix E).

In order to verify the representativeness of the sample, these demographics were checked against data found in the secondary research. An off-road mountain biking research report conducted in New Zealand in 1995 found similar demographics; people aged 20-49 represented 69 percent of that sample. The gender gap was apparent there as well, with males accounting for 85 percent. (Cessard, 1995)

Findings Keyed to Objectives

OBJECTIVE 1:

To create a description of the typical mountain biking enthusiast.

To provide insight into the make up of the typical mountain biking enthusiast, several questions from the survey were examined. First, this report examined those questions relating to riding experience and habits. The second group of questions, demographics, has been discussed in the previous section and will be briefly recapped.

Overall riding experience (Questions 1 and 2) was addressed directly by the number of years the respondents had been riding mountain bikes and their rating of their skill level. Respondents were given an opened-ended question asking them to indicate the number of years they had participated in the sport. Most respondents stated they had been riding between two and ten years (76 percent). This would correspond with the rise in popularity of the sport that began in the early nineties. Using a response scale from one (beginner) to ten (expert), respondents were asked to rate their riding skills. Table 2 below categorizes years riding and lists skill levels. The mean response for skill level was 6.56 indicating a "high intermediate" riding ability, depending on the respondent's interpretation. For the purposes of this report, in regards to the skill category, responses ranging from five to seven will be described as being "intermediate." This encompasses half of the sample (50.4 percent).

Table 2
Years Riding and Skill Levels

Years Riding	Number	Percent	Skill Level	Number	Percent
Less than a year	4	1.8	Beginner	6	2.7
1-5 years	90	40.9	2	3	1.4
6-10 years	86	39.1	3	8	3.6
11-15 years	33	15.0	4	15	6.8
16-20 years	5	2.3	5	26	11.7
21 years or more	2	0.9	6	38	17.1
Total	220	100.0	7	48	21.6
			8	48	21.6
			9	18	8.1
Mean Years Riding:	7.05		Expert	12	5.4
Mean Skill Level:	6.56		Total	222	100.0

Riding habits were next posed to respondents (Questions 3-5). Respondents were given a list of categories to choose how often they typically spent mountain biking. A little over half of the participants indicated that they rode two to four times a week (54 percent). Bikers did not travel far in order to ride; the average distance was 14.5 miles. Respondents indicated that they often did not ride alone; 61 percent said that they rode with others, with groups of two to four appearing most frequently.

As discussed in the description of the sample, in regards to demographics, the average respondent was a relatively young (mean age 33) male, well educated, who maintained a high level of income. For males aged 20 to 39 the number of riders increased in step with skill level. The pattern is similar for females of the same age group but the results are less pronounced due to the low representation of females.

OBJECTIVE 2:

To measure mountain bikers' levels of involvement in mountain biking.

In order to meet objective two, closed- and open-ended questions were asked concerning respondents' perceived benefits from mountain biking, their participation in other outdoor activities, and their affiliations with mountain biking and other sports-related organizations.

To determine what interested people in the sport of mountain biking, respondents were asked to indicate from a provided list the benefits they appreciated most about the activity (Question 6). Approximately three-fourths of respondents indicated that health factors, being outdoors, and the thrill of riding were the most important benefits they received. Table 3 on the following page lists all benefits and their incident rates.

To determine whether the respondents' active lifestyles extended beyond mountain biking, they were provided with a list of eight outdoor activities and asked to indicate any that they participated in (Question 18). The most popular among these activities were road biking and hiking, receiving 60 and 52 percent, respectively. Respondents were given the opportunity to fill in an open-ended option to include any activities that the survey instrument did not include. Although a number of different activities were given, there was no clear majority. A complete listing of these activities can be located in the verbatim response report in Appendix E.

Table 3
Benefits and Outdoor Activities

Benefits	Percent*	Outdoor Activities	Percent*
Improved Health	79	Road Biking	60
Being Outdoors	79	Hiking	52
Thrill Excitement	74	Running	29
Challenge	68	Cross-Country Skiing	23
Improving Skills	56	Downhill Skiing	22
Solitude	50	Snow Boarding	20
Social Activity	39	In-Line Skating	13
Racing	27	Aerobics	2

*n = 224 for all items; respondents were allowed to select all applicable choices.

Respondents were asked to indicate from a list of choices any advocacy related activities in which they had participated within the last year (Question 17). Overall, respondents indicated a moderate rate of advocacy activities. Nearly half of all respondents had participated in trail maintenance but the next highest categories, donations and lobbying, were only half as high. Table 4 below lists the advocacy categories and their incident rates.

Table 4
Advocacy Activities

Advocacy Activity	Number	Percent*
Trail Maintainenance	107	47.8
Donated Money (excluding fees)	55	24.6
Lobbying	51	22.8
Donated Money to Environmental Organization	44	19.6
Member of a Fee Biking Organization	27	12.1
Member of a Non-Fee Biking Organization	21	9.4

*Respondents were allowed to select all applicable choices.

Respondents were asked whether or not they belonged to a cycling organization (Question 16) and, if so, to identify the organization. Nearly half of all participants, 43 percent, were members of at least one mountain bike-related organization. Of those individuals, 55 percent belonged to multiple organizations. These individuals typically belonged to a national organization, like the International Mountain Biking Association, and a local club. Ten percent of respondents, twenty-two in all, were members of the

Michigan Mountain Biking Association. Fifteen percent described themselves as being a member of the IMBA. This was the same percentage as participants who stated being a member of a single local organization. Table 5 below highlights the number of memberships and the primary organizations respondents affiliated themselves with.

Table 5
Mountain Biking Organization Memberships

Number of Memberships	Number	Percent	Organization	Number	Percent
One	44	45.4	International Mountain Biking Association	33	14.7
Two	40	41.2	Single local organization	33	14.7
Three	9	9.3	Michigan Mountain Biking Association	22	9.8
Four	4	4.1	United States Cycling Federation	17	7.6
Total	97	100.0	National Off Road Bicycle Association	15	6.7
			IMBA affiliate organization (excluding MMBA)	11	4.9
			Multiple local organizations	11	4.9
			Copper County Cycling Club	6	2.7
			Adventure Cycling	2	0.9

A similar question was also presented to respondents asking if they had belonged to any sporting-related organizations other than mountain biking (Question 18). A clear majority indicated they did not, with road biking organizations achieving the highest membership rate at 13 percent.

In summary, most respondents indicated that health factors, being outdoors, and excitement and/or the thrill were the most important benefits received from biking. Respondents' active lifestyles extended beyond mountain biking into road biking and hiking; half participated in trail maintenance. Additionally, nearly half of the participants were members of at least one mountain bike-related organization. Of these individuals, 55 percent belonged to multiple organizations.

OBJECTIVE 3:

To determine a profile of bike ownership and purchases.

To meet this objective, respondents were asked a series of closed-ended questions regarding the types of bikes and brands they owned, how much they spent annually on bikes and equipment, and their decision making process.

Mountain biking is a sport that requires specific equipment; consumers have a multitude of products to choose from. The harsh nature of the sport can be demanding on equipment, requiring riders to make frequent purchases. Respondents were asked an open-ended question about how many bikes they owned (Question 8); 69 percent indicated owning between two and four bikes, with a mean of 3.24.

Riders were next asked to indicate the types and brands of bikes they owned from a provided list (Questions 9-10). Hard tail bikes were the most owned type, as indicated by 70.5 percent of respondents. The next most popular type was road bikes with 58 percent. This finding correspondents with the activity's popularity among mountain bikers discussed previously. Full-suspension mountain bikes were owned by 48 percent.

When it comes to brands, biking consumers have a large assortment of names to choose from. Respondents were given a list of well known brands and asked to indicate those they owned (Question 10). Specialized and Trek were the two most popular brands among respondents, coming in at 25 and 23.2 percent, respectively. Here participates were given the opportunity to include any brands that the survey may have missed. A large number of different brands were listed, although no majority was apparent. A complete listing is included in the verbatim response report. (See Appendix E).

Respondents were then asked two open-ended questions concerning the price of their most recent bike purchase and how much they typically spent on equipment and accessories in the last year (Questions 11 and 12). The mean dollar amount reported being spent for their last bike was $1,859, with $773 spent on equipment and accessories

in the last year.

As these figures demonstrate, the relatively expensive nature of this equipment may prompt mountain biking consumers to research products before purchasing. Respondents were asked whether or not they conducted product research and, if so, to indicate which products they typically performed research on before purchasing (Question 13). Practically all respondents performed some kind of product research. Most research conducted by respondents was on components and bikes, receiving 88 and 84 percent, respectively. Two-thirds of the respondents stated they conducted research on tires before purchasing. See Table 6 below for product statistics.

As a follow-up question, respondents were next asked about their sources of information (Question 14). The majority of respondents, 86 percent, gathered their information from other riders. Approximately 60 percent indicated their research sources as being from the Internet, brochures, or bike shops. Table 6 below lists all categories and their percentage rates.

Table 6
Product Research

Product	Percent*	Source	Percent*
Components	88	Asking Others	86
Bikes	83	Internet	63
Tires	67	Brochures	62
Shoes	54	Bike Shop	60
Tools	37	Magazines	43
Other	15	Catalogs	31
Decision Factor	**Percent***	**Decision Factor**	**Percent***
Price	55	Shop Recommendation	29
Fit/Comfort	55	Weight	26
Test Ride	33	Brand	18
Friend's Recommendation	31	Innovation	11
Component Selection	30		

*n = 224 for all items; respondents were allowed to select all applicable choices.

The final set of purchasing questions asked respondents to indicate the most important factors in their decision making process (Question 15) from a list of ten factors. The two that were indicated as being the most important were product price and fit, with a 55 percent incident rate for each. A complete listing of factors and their results is located in Table 6.

Results showed that the longer persons had been riding and the greater they evaluated their skill level to be, the more they had spent on bikes and related equipment. Experts spent on average $2,237 on their last bike purchase and $946 yearly on equipment purchases. This compares to intermediate skilled riders who spent $1,358 and $545, respectively.

In summary, due to the nature of the activity riders own multiple bikes, most between two and four. The most preferred types were hard tail, road bikes, and full-suspension with Specialized and Trek being the most popular brands. The average amount spent for a respondent's last bike was $1,859, with $773 on equipment and accessories last year. Before purchasing bikes, components, and tires, research was conducted. Information was typically obtained by asking other riders. Other sources included bike shops, the Internet, and company materials.

OBJECTIVE 4:

To determine the level of awareness and interest in the MMBA and its activities.

In order to meet this objective, questions were asked regarding respondents' awareness of the MMBA, its role in addressing advocacy issues, and the level of interest participants would have in joining an organization with the key characteristics of the MMBA.

Participants were asked to indicate the degree of importance they attached to five specific mountain biking issues, using a ten point scale with 1 indicating 'very important'

and 10 'very unimportant' (Question 19). Three issues that were considered to be very important to respondents were building and maintaining trails, building a positive image of mountain biking, and limiting environmental damage. Safety and racing were also rated as being moderately important. See Table 7 for detailed ratings.

Respondents were next asked if they were aware of the MMBA by indicating 'yes' or 'no' (Question 20). Approximately one-third of the sample (29.5 percent) indicated that they were aware of the organization. Individuals who answered 'yes' were then asked to rate their level of familiarity with the MMBA, on a scale from 1 (very familiar) to 10 (not familiar at all). The mean response for this question was 5.76, indicating only moderate familiarity. A rating of three or better was given by 34 percent of respondents.

As an additional follow-up, respondents who had answered 'yes' to the familiarity question were then requested to rate the MMBA on the mountain biking-related issues they were previously asked to measure for importance. This time the scale was reversed where 1 represented 'very weak' and 10 'very strong.' Overall, the organization was rated as being intermediate to strong, with a mean between six and seven for all categories, in view of its performance on these advocacy concerns. The mean ratings are provided in Table 7 below.

Table 7
Advocacy Issues and MMBA Ratings

	Mean Response	
Advocacy Issue	**Overall Imporance[1]**	**MMBA Rating on Issue[2]**
Maintaining and building new trails	6.87	6.69
Building a positive image of mountain biking	6.74	6.29
Limiting environmental damage from biking	6.70	6.08
Safety Issues	5.60	6.20
Racing Events	4.40	6.29

[1] n approximately 216 for all (see annotated survey for actual); scale has been reverse-coded to provide comparability with the MMBA rating on advocacy issues; therefore, 1 = 'very unimportant,' 10 = 'very important,' for this table only.
[2] n approximately 52 for all (see annotated survey for actual), 1 = 'very weak,' 10 = 'very strong."

Since the MMBA is a state-specific organization and the sample was global, it was important to determine the respondents' familiarity with the trail system in Michigan (Question 21). Twenty-four percent of respondents indicated being familiar with the state's trail system; this corresponds with the percent of the sample who resided in Michigan (28.9 percent), discussed in the description of the sample. A follow-up question asked these respondents to rate the level of Michigan's trails system on a scale from 1 (poor) to 10 (excellent). The mean score was 7.14, indicating that respondents considered the trail system in Michigan to be quite good.

The final biking question posed to respondents was to judge their level of interest in joining an organization with the key characteristics of the MMBA (Question 22). Again, a ten point scale was used with one indicating "no interest in joining" and ten indicating "a strong interest in joining." For obvious reasons, only nonmembers' responses were of interest here. The mean response was 6.27 for the 194 nonmembers who answered the question. Sixty-six percent indicated a higher than average level of interest in joining (a rating of six or higher). Nonmembers who were Michigan residents also indicated a higher than average interest in joining; of the 29 percent who are currently residents, 19 percent rated interest at six or higher. These responses hold promise for the future. These levels of interest may indicate that there is a need within the mountain biking community that is going either unmet or unrecognized. Membership with the MMBA could be a means of meeting this need but as results have shown awareness of the organization is not high.

Those who identified themselves as being members of a fee based organization had one or more of the following characteristics: they had been riding at least 7 years, rated themselves as expert skilled, or had spent $2,000 and $800 on bikes and equipment, respectively. Riders who took an active role in trail maintenance and lobbied for trail access had one of the following characteristics: they evaluated their skill level as expert, had spent more than $2,000 on their last bike purchase, had spent more than $800 last year on components, had been riding at least seven years, or belonged to at least one biking organization.

In summary, the three advocacy issues considered to be very important to respondents were building and maintaining trails, promoting a positive image of mountain biking, and limiting environmental damage. A third of the sample was familiar with the MMBA. Most individuals were moderately familiar with the organization and rated it as being moderate to strong in terms of its performance on advocacy concerns. Participants familiar with Michigan's trail system considered it be very good. Over half of the sample indicated a strong interest in joining an organization with the key characteristics of the MMBA.

Conclusions

This section discusses some key findings that can be drawn from this study and is organized according to the study's objectives.

To create a description of the typical mountain biking enthusiast. Mountain bikers are relatively young males between the ages of 20 and 40, well educated, and who maintain a high level of income. Most of these individuals began riding in the last ten years, consider themselves to possess expert riding abilities, and ride two to four times a week.

To measure mountain bikers' levels of involvement in mountain biking. Mountain biking enthusiasts show significant involvement in their sport. The fact that half of the participants in this study were members of a biking-related organization and actively contribute to trail maintenance is evidence of this. This is all part of a highly active lifestyle bikers maintain. Bikers participate in a multitude of diverse activities, the commonalities seeming to be outdoors and health, two of the top biking benefits listed by respondents. This high activity could also be one reason why membership and advocacy numbers were not higher; people simply do not have time for everything.

To determine a profile of bike ownership and purchases. Consumers of mountain biking equipment and accessories recognize that in this segment higher quality products come with higher prices; they are willing to pay extra. There are a wide assortment of brand names to choose from and, because of this, there is no clear preference, although Specialized and Trek were the most popular in this study. The higher costs and multitude of choices often prompt consumers to perform research before purchasing, typically on components and bikes.

To determine the level of awareness and interest in the MMBA and its activities. This report showed that the MMBA has been less than effective communicating its values within the riding community. Only thirty percent of the sample were aware of the

organization and familiarity was mostly moderate. Despite this low level of awareness, the MMBA is recognized as being strong in the area of advocacy concerns important to bikers.

Limitations

This research study was conducted using the most appropriate methods and procedures for the time frame and resources available. However, some limitations existed, as described below.

1. *An Internet-administered study target population cannot be limited to only those participants who reside in Michigan.* Ideally, since MMBA is seeking to increase membership from this specific location, one would have liked to have drawn a population from Michigan alone. However, the respondents', areas of residence were determined through proper question coding.

2. *Statistical precision of some information is affected by the small sample size.* Accuracy is a function of the size of the sample. While 224 is a sufficiently large sample to be confident of these results, where a particular question has a smaller number of responses, conclusions and implications must be drawn with caution.

Appendix A:
Survey

Biking Survey

The following survey is part of a project for a mountain biking organization. These questions are meant to help develop a profile of the average mountain biker. No identification will be asked for so all information will remain private and will be used solely for the purpose of this project.

Please take your time and answer the following questions as completely as possible. To complete this survey should take no longer than 15-20 minutes.

Your cooperation is greatly appreciated.

1. How many years have you participated in mountain biking? _____

2. How would you rate your skill level as a mountain biker?

Beginner				Intermediate					Expert
1	2	3	4	5	6	7	8	9	10

3. How often do you mountain bike?
   - [ ] Everyday
   - [ ] Two to four times a week
   - [ ] Once a week
   - [ ] Once every two weeks
   - [ ] Once a month

4. What typical distance do you travel in order to ride (in miles)? _____

5. Do you generally ride alone or with other people?
   [ ] Alone [ ] With Others

   If ***WITH OTHERS***, what is the average size of your group? _____

6. What other outdoor activities do you participate in?
   (Please select all that apply).
   - [ ] Aerobics
   - [ ] Cross-Country Skiing
   - [ ] Downhill Skiing
   - [ ] Hiking
   - [ ] In-line Skating
   - [ ] Road Biking
   - [ ] Running
   - [ ] Snow-Boarding
   - [ ] Other:

7. What benefits do you appreciate most about mountain biking?
   (Please select all that apply.)
   [ ] Thrill (speed, excitement)
   [ ] Health (exercise, fitness)
   [ ] Socializing
   [ ] Racing
   [ ] Challenge
   [ ] Solitude
   [ ] Enjoying the outdoors
   [ ] Improving your skills
   [ ] Other

8. How many bikes do you currently own? _____

9. What type(s) of bike(s) do you own?
   (Please check all that apply).
   [ ] Rigid Mountain
   [ ] Hardtail Mountain
   [ ] F/S Mountain
   [ ] Road
   [ ] BMX
   [ ] Cross
   [ ] Hybrid
   [ ] Other:

10. What brand(s) of mountain bike(s) to you currently own?
    (Please check all that apply).
    [ ] Arrow Racing
    [ ] Brodie
    [ ] Cannondale
    [ ] Diamondback
    [ ] Gary Fisher
    [ ] Giant
    [ ] G.T. Bicycles
    [ ] Huffy
    [ ] Ibis
    [ ] K2
    [ ] Mongoose
    [ ] Raleigh
    [ ] Rocky Mountain Bicycles
    [ ] Schwinn
    [ ] Specialized
    [ ] Trek
    [ ] Other

11. What was the price of your most recent bike? _____

12. How much do you typically spend on equipment and accessories in a year? _____

13. Before you buy bicycle gear, do you usually research your purchase?
[ ] Yes [ ] No [ ] Depends on product

If you answered ***YES or Depends***, which product categories do you research before you buy?
(Please check all that apply.)
[ ] Bikes
[ ] Components
[ ] Tires
[ ] Shoes
[ ] Tools
[ ] Other

14. Where do you research your purchase?
(Please check all that apply.)

[ ] Bike shop
[ ] Biking-related publication
[ ] Internet
[ ] Catalog
[ ] Company materials
[ ] Asking others
[ ] Other:

15. Please indicate the three most important factors in your purchase?
[ ] Shop employee recommendation
[ ] Test ride
[ ] Friend's recommendation
[ ] Innovation
[ ] Price
[ ] Color / Appearance
[ ] Fit / Comfort
[ ] Brand
[ ] Component Selection
[ ] Weight
[ ] Other

16. Are you currently a member of a cycling association?
[ ] Yes [ ] No

If ***YES***, please list which organization(s) you are currently a member of: _____
_____

17. In the past year, in which of the following activities have you participated?

[ ] Trail maintenance
[ ] Lobbying to keep trails open to bikers/open more trails
[ ] Have been a member of a non-fee based biking organization
[ ] Have been a member of a fee based biking organization
[ ] Have donated money (other than membership fees) to a biking organization
[ ] Have donated money or have been a member of an environmental charity/organization not concerned with directly concerned with mountain biking

18. Are you currently a member of a sporting-related organization other than mountain biking?

[ ] Yes [ ] No

If ***YES***, please indicate which sport this organization is concerned with.
(Please check all that apply.)

[ ] Aerobics
[ ] Cross-Country Skiing
[ ] Downhill Skiing
[ ] Hiking
[ ] In-line Skating
[ ] Road Biking
[ ] Running
[ ] Snow-Boarding
[ ] Other

19. Please rate the following on how important each is to you with very important being on the left and very UNimportant being on the right.

	Very Important									Very Unimportant
Maintaining and building new trails	1	2	3	4	5	6	7	8	9	10
Building a positive image of mountain biking	1	2	3	4	5	6	7	8	9	10
Limiting environmental damage from biking	1	2	3	4	5	6	7	8	9	10
Racing Events	1	2	3	4	5	6	7	8	9	10
Safety Issues	1	2	3	4	5	6	7	8	9	10

20. Are you aware of the Michigan Biking Association (MMBA)?

[ ] Yes [ ] No

If you answered ***NO***, please skip to Question 21.
If you answered ***YES***, please answer the following two questions.

How familiar are you with the MMBA?

Very Familiar									Not Familiar at All
1	2	3	4	5	6	7	8	9	10

How would you rate the MMBA on the following attributes:

	Very Weak									Very Strong
Maintaining and building new trails	1	2	3	4	5	6	7	8	9	10
Building a positive image of mountain biking	1	2	3	4	5	6	7	8	9	10
Limiting environmental damage from biking	1	2	3	4	5	6	7	8	9	10
Racing Events	1	2	3	4	5	6	7	8	9	10
Safety Issues	1	2	3	4	5	6	7	8	9	10

21. Are you familiar with the trail system in Michigan?
[ ] Yes [ ] No

If you selected ***YES***, how would you rate the trail system in Michigan?

Very Poor							Excellent		
1	2	3	4	5	6	7	8	9	10

22. How interested would you be in joining an organization that promotes responsible mountain biking and works towards the goals of common land access and natural resource protection through interaction?

Not at All Interested								Very Interested	
1	2	3	4	5	6	7	8	9	10

23. In what year were you born? _____

24. What is your gender?
[ ] Male [ ] Female

25. Including yourself, how many people live in your household? _____

26. What is your current household income before income taxes?
[ ] No Income
[ ] $ 1 – 29,999
[ ] $ 30,000 – 59,999
[ ] $ 60,000 – 99,999
[ ] $ 100,000 or above

27. What is your highest level of education obtained?
    [ ] High School
    [ ] Associates
    [ ] Bachelors
    [ ] Masters
    [ ] Doctorate

28. In what state do you reside (if within the United States)? _____

29. In what country do you reside (if outside the United States)? _____

Appendix B:
Annotated Survey

Biking Survey

The following survey is part of a project for a mountain biking organization. These questions are meant to help develop a profile of the average mountain biker. No identification will be asked for so all information will remain private and will be used solely for the purpose of this project.

Please take your time and answer the following questions as completely as possible. To complete this survey should take no longer than 15-20 minutes.

Your cooperation is greatly appreciated.

1. How many years have you participated in mountain biking? **n=220, Mean = 7.05**

2. How would you rate your skill level as a mountain biker?

	Beginner						Intermediate				Expert
	1	2	3	4	5	6	7	8	9	10	
n=222	**6**	**3**	**8**	**15**	**26**	**38**	**48**	**48**	**18**	**12**	**Mean=6.56**

3. How often do you mountain bike?

n=223	Everyday	**23**	**10.3%**
	Two to four times a week	**121**	**54.0%**
	Once a week	**35**	**15.6%**
	Once every two weeks	**16**	**7.1%**
	Once a month	**17**	**7.6%**
	Less than once a month	**7**	**3.1%**

4. What typical distance do you travel in order to ride (in miles)? **n=180, Mean=14.46**

5. Do you generally ride alone or with other people?

n=219	Alone	**85**	**38.8%**
	With Others	**134**	**61.2%**

If ***WITH OTHERS***, what is the average size of your group? **n=111, Mean=3.79**

6. What other outdoor activities do you participate in?
(Please select all that apply).

n=224	Aerobics	**5**	**02.2%**
	Cross-Country Skiing	**52**	**23.2%**
	Downhill Skiing	**50**	**22.3%**
	Hiking	**117**	**52.2%**
	In-line Skating	**30**	**13.4%**
	Road Biking	**134**	**59.8%**
	Running	**66**	**29.5%**
	Snow-Boarding	**45**	**20.1%**
	Other: **See verbatim responses in Appendix E**		

7. What benefits do you appreciate most about mountain biking?
(Please select all that apply.)

n=224	Thrill (speed, excitement)	**165**	**73.7%**
	Health (exercise, fitness)	**176**	**78.6%**
	Socializing	**87**	**38.8%**
	Racing	**61**	**27.2%**
	Challenge	**153**	**68.3%**
	Solitude	**112**	**50.0%**
	Enjoying the outdoors	**178**	**79.5%**
	Improving your skills	**126**	**56.3%**
	Other: **See verbatim responses in Appendix E**		

8. How many bikes do you currently own? **n=218, Mean=3.24**

9. What type(s) of bike(s) do you own?
(Please check all that apply).

n=224	Rigid Mountain	**52**	**23.2%**
	Hardtail Mountain	**158**	**70.5%**
	F/S Mountain	**108**	**48.2%**
	Road	**130**	**58.0%**
	BMX	**12**	**05.4%**
	Cross	**21**	**09.4%**
	Hybrid	**17**	**07.6%**
	Other: **See verbatim responses in Appendix E**		

10. What brand(s) of mountain bike(s) to you currently own?
(Please check all that apply).

n=224	Arrow Racing	**0**	**00.0%**
	Brodie	**2**	**0.90%**
	Cannondale	**33**	**14.7%**
	Diamondback	**12**	**05.4%**
	Gary Fisher	**21**	**09.4%**
	Giant	**21**	**09.4%**
	G.T. Bicycles	**26**	**11.6%**
	Huffy	**2**	**0.90%**
	Ibis	**7**	**03.1%**
	K2	**6**	**02.7%**
	Mongoose	**8**	**03.6%**
	Raleigh	**8**	**03.6%**
	Rocky Mountain Bicycles	**6**	**02.7%**
	Schwinn	**25**	**11.2%**
	Specialized	**56**	**25.0%**
	Trek	**52**	**23.2%**
	Other: **See verbatim responses in Appendix E**		

11. What was the price of your most recent bike? **n=214, Mean=1859.21**

12. How much do you typically spend on equipment and accessories in a year? **n=209, Mean=773.36**

13. Before you buy bicycle gear, do you usually research your purchase?

n=224	Yes	**12**	**5.4%**
	No	**141**	**62.9%**
	Depends on product	**71**	**31.7%**

If you answered ***YES or Depends***, which product categories do you research before you buy?
(Please check all that apply.)

n=224	Bikes	**187**	**83.5%**
	Components	**198**	**88.4%**
	Tires	**150**	**67.0%**
	Shoes	**120**	**53.6%**
	Tools	**83**	**37.1%**
	Other: **See verbatim responses in Appendix E**		

14. Where do you research your purchase?
(Please check all that apply.)

n=224	Bike shop	**135**	**60.3%**
	Biking-related publication	**96**	**42.9%**
	Internet	**142**	**63.4%**
	Catalog	**70**	**31.3%**
	Company materials	**139**	**62.1%**
	Asking others	**193**	**86.2%**
	Other: **See verbatim responses in Appendix E**		

15. Please indicate the three most important factors in your purchase?
(Please check all that apply.)

n=224	Shop employee recommendation	**64**	**28.6%**
	Test ride	**74**	**33.0%**
	Friend's recommendation	**70**	**31.3%**
	Innovation	**25**	**11.2%**
	Price	**124**	**55.4%**
	Color / Appearance	**43**	**19.2%**
	Fit / Comfort	**123**	**54.9%**
	Brand	**41**	**18.3%**
	Component Selection	**66**	**29.5%**
	Weight	**58**	**25.9%**
	Other: **See verbatim responses in Appendix E**		

16. Are you currently a member of a cycling association?

n=224	Yes	**97**	**43.3%**
	No	**127**	**56.7%**

If ***YES***, please indicate which organization(s) you are currently a member of: **See verbatim responses in Appendix E**

17. In the past year, in which of the following activities have you participated?

n=224	Trail maintenance	**107**	**47.8%**
	Lobbying to keep trails open to bikers/open more trails	**51**	**22.8%**
	Have been a member of a non-fee based biking organization	**21**	**09.4%**
	Have been a member of a fee based biking organization	**27**	**12.1%**
	Have donated money (other than membership fees) to a biking organization	**55**	**24.6%**
	Have donated money or have been a member of an environmental charity/organization not concerned with directly concerned with mountain biking	**44**	**19.6%**

18. Are you currently a member of a sporting-related organization other than mountain biking?

n=224	Yes	**77**	**34.4%**
	No	**147**	**65.6%**

If ***YES***, please indicate which sport this organization is concerned with.
(Please check all that apply.)

n=224	Aerobics	**0**	**0.0%**
	Cross-Country Skiing	**7**	**3.1%**
	Downhill Skiing	**13**	**5.8%**
	Hiking	**5**	**2.2%**
	In-line Skating	**0**	**0.0%**
	Road Biking	**31**	**13.8%**
	Running	**9**	**4.0%**
	Snow-Boarding	**2**	**0.9%**
	Other:	**See verbatim responses in Appendix E**	

19. Please rate the following on how important each is to you with very important being on the left and very UNimportant being on the right.

Maintaining and building new trails

Very Important	1	2	3	4	5	6	7	8	9	10	Very Unimportant
n=216	**74**	**39**	**33**	**21**	**17**	**6**	**7**	**9**	**2**	**8**	**Mean=3.13**

Building a positive image of mountain biking

Very Important	1	2	3	4	5	6	7	8	9	10	Very Unimportant
n=216	**78**	**36**	**31**	**15**	**16**	**11**	**6**	**7**	**3**	**13**	**Mean=3.26**

Limiting environmental damage from biking

Very Important	1	2	3	4	5	6	7	8	9	10	Very Unimportant
n=216	**69**	**31**	**45**	**15**	**20**	**8**	**9**	**6**	**3**	**10**	**Mean=3.30**

Racing Events

Very Important	1	2	3	4	5	6	7	8	9	10	Very Unimportant
n=216	**23**	**18**	**16**	**25**	**27**	**19**	**23**	**18**	**16**	**30**	**Mean=5.60**

Safety Issues

Very Important	1	2	3	4	5	6	7	8	9	10	Very Unimportant
n=216	**38**	**15**	**38**	**25**	**40**	**17**	**9**	**10**	**6**	**16**	**Mean=4.40**

20. Are you aware of the Michigan Biking Association (MMBA)?

n=216	Yes	**66**	**30.6%**
	No	**150**	**69.4%**

If you answered ***NO***, please skip to Question 21.
If you answered ***YES***, please answer the following two questions.

How familiar are you with the MMBA?

Very familiar	1	2	3	4	5	6	7	8	9	10	Not familiar at all
n=76	**15**	**7**	**4**	**3**	**4**	**5**	**6**	**8**	**9**	**15**	**Mean=5.79**

How would you rate the MMBA on the following attributes:

Maintaining and building new trails

Very Weak	1	2	3	4	5	6	7	8	9	10	Very Strong
n=52	**4**	**1**	**2**	**3**	**8**	**3**	**6**	**10**	**6**	**9**	**Mean=6.69**

Building a positive image of mountain biking

Very Weak	1	2	3	4	5	6	7	8	9	10	Very Strong
n=52	**3**	**2**	**3**	**3**	**9**	**4**	**9**	**9**	**5**	**5**	**Mean=6.29**

Limiting environmental damage from biking

Very Weak	1	2	3	4	5	6	7	8	9	10	Very Strong
n=51	**3**	**3**	**3**	**5**	**7**	**7**	**3**	**10**	**6**	**4**	**Mean=6.08**

Racing Events

Very Weak	1	2	3	4	5	6	7	8	9	10	Very Strong
n=51	**5**	**2**	**1**	**1**	**7**	**6**	**9**	**12**	**5**	**3**	**Mean=6.29**

Safety Issues

Very Weak	1	2	3	4	5	6	7	8	9	10	Very Strong
n=49	**3**	**1**	**0**	**1**	**12**	**10**	**9**	**8**	**2**	**3**	**Mean=6.20**

21. Are you familiar with the trail system in Michigan?

n=209	Yes	**50**	**22.3%**
	No	**159**	**71.0%**

If you selected ***YES***, how would you rate the trail system in Michigan?

Very Poor	1	2	3	4	5	6	7	8	9	10	Excellent
n=51	**1**	**0**	**2**	**2**	**3**	**5**	**12**	**18**	**4**	**4**	**Mean=7.14**

22. How interested would you be in joining an organization that promotes responsible mountain biking and works towards the goals of common land access and natural resource protection through interaction?

Not Interested	1	2	3	4	5	6	7	8	9	10	Very Interested
n=211	**22**	**5**	**10**	**5**	**28**	**30**	**25**	**33**	**24**	**29**	**Mean=6.38**

23. In what year were you born? **n=215, Mean =32.9**

24. What is your gender?

n=216	Male	**190**	**88.0%**
	Female	**26**	**12.0%**

25. Including yourself, how many people live in your household? **n=215, Mean=2.87**

26. What is your current household income before income taxes?

n=200	No Income	**7**	**3.5%**
	$ 1 – 29,999	**20**	**10.0%**
	$ 30,000 – 59,999	**67**	**33.5%**
	$ 60,000 – 99,999	**60**	**30.0%**
	$ 100,000 or above	**46**	**23.0%**

27. What is your highest level of education obtained?

n=214	High School	**56**	**26.2%**
	Associates	**36**	**16.8%**
	Bachelors	**90**	**42.1%**
	Masters	**19**	**8.9%**
	Doctorate	**13**	**6.1%**

28. In what state do you reside (if within the United States)? **See verbatim responses in Appendix E**

29. In what country do you reside (if outside the United States)? **See verbatim responses in Appendix E**

Appendix C:
Internet Survey Sites

Invitation Message

Please Participate in MTB Survey

As part of a project for a mountain biking organization, I am administering a survey to develop a profile of the average mountain biker. This survey is not associated with any company or website. All information will remain private and used only for this project. The survey only takes a few minutes to complete and your assistance would be greatly appreciated.

Thank you in advance.

http://cbatest.cba.cmich.edu/mkt/survey/survey.htm

Posted Sites

DirtWorld.com
http://www.dirtworld.com/

From humble beginnings rooted in the damp Pacific Northwest DirtWorld.com evolved to a global company from the seedling planted by Dirt Northwest in 1996. Just like you, we're slaves to the dirt with addictions that need feeding!

DirtWorld.com has a strong position among mountain bike enthusiasts. From beginners to racers, DirtWorld has them covered with product reviews, event listings, trail guides, feature stories and much more. From information to products, DirtWorld.com is THE online mountain bike resource.

Cyber Cyclery
http://cyclery.com/

Cyber Cyclery was started over 5 years ago with the concept of providing a resource for bicycle enthusiasts searching for information on the Internet. Since that time we have grown into indisputably one of the most popular web sites for bicyclists.

MTBONLINE.net
http://www.mtbonline.net/

MTBONLINE.net was developed by Advantage Web Design, Inc. We aim at offering the most in depth, up to date mountain biking instructionals, and coverage for online users across the globe.

Adventure Sports Mountain Biking Posting Board
http://forums.vmag.com/azmountainbiking/

MountainBike.com
http://www.mountainbike.com/
MountainBikeNJ.com
http://www.mountainbikenj.com/mboard.asp

Ohio Mountain Bike Association Message Board
http://www.joinomba.org/wwwboard/index.html

Western New York Mountain Bike Association
http://www.wnymba.org/cgi-bin/ultimatebb.cgi

CYCLINGFORUM.COM
http://www.cyclingforum.com/

CYCLINGFORUM.COM is an online community geared primarily for road cycling discussions - but general cycling questions are always welcome. You will be pleasantly surprised (and sometimes overwhelmed) by the quality of the responses you will receive from people who are genuinely interested in helping you get the most out of the sport.

http://www.clubmtb.com/

Copper County Cycling Club
http://www.sos.mtu.edu/cycling/

*Note: Message sent through organization's mailing list.

Bicycling
http://www.bicycling.com/

VeloNews
http://www.velonews.com/

VeloNews.com first showed up on browsers in 1994, and we've had a full-time presence on the Internet since the spring of 1995. Our timeliness, comprehensive coverage and reliability have been recognized across the industry, as well as by "The New York Times" and "Fast Company" magazine. The current site offers the broadest range of content yet -- same-day race coverage, news, features, and user forums.

Newsgroups

news://alt.mountain-bike
news://rec.bicycles.off-road
news://rec.bicycles.marketplace
news://rec.bicycles.racing
news://rec.bicycles.soc

Yahoo! Clubs

American Mountain Biking Club
http://clubs.yahoo.com/clubs/americanmountainbikingclub

Bike
http://clubs.yahoo.com/clubs/bike

Cycling
http://clubs.yahoo.com/clubs/cycling

ecmbc
http://clubs.yahoo.com/clubs/ecmbc
ECMBC stands for East Coast Mountain Biking Club. This club will mostly talk about mountain biking in the east.

Mountain Bike
http://clubs.yahoo.com/clubs/mountainbike

Mountain Bike Forever
http://clubs.yahoo.com/clubs/mountainbikeforever

Mountain Biking in Michigan
http://clubs.yahoo.com/clubs/mountainbikinginmichigan

Rails To Trails Discussions
http://clubs.yahoo.com/clubs/railstotrailsdiscussions

Rocky Mountain Bikes
http://clubs.yahoo.com/clubs/rockymountainbikes

The Bicycle Club
http://clubs.yahoo.com/clubs/thebicycleclub

Appendix D:
Secondary Research

Summary of Secondary Data (Internet)

Mountain Biking - A Crash Course
Http://mountainbike.about.com/

Cycling has increased in popularity over the last ten years, in large part because of the fastest growing segment of the sport - mountain biking.

Mountain biking, as we know it today, began in North America in the early 1970s as a grass-roots pastime. Scattered groups of individuals began to put fat tires on their road bikes and over a period of years, these groups found one another and began to do what came naturally - compete. Soon, two segments of the sport evolved: downhill and cross-country. Today, the different categories of bikes and events can at times sound very confusing, however, all mountain bikes still fit into one of the two original groups.

Downhill:
This generally means that the most important aspect of the ride is going "down the hill". Downhill mountain biking competitions parallel those associated with downhill skiing in that they both feature downhill, giant slalom, slalom and freestyle events. Downhill bikes sacrifice light weight for sturdiness and support and they are usually full suspension (front and rear shocks) which provide a great deal more traction and control. Special attention is paid to brakes which tend to be of the disc variety. The important thing to remember is that with downhilling, riders think of gravity as a very close friend.

Cross-Country:
Cross-country mountain biking is everything that downhilling is not. The bikes required for this type of riding (although sturdy) are constructed to be as lightweight as possible. Gravity is not a friend here because climbing hills is the most important element of the ride. Cross-country bikes tend to be what are known as hardtails, meaning they are equipped with a shock up front, but not at the rear. Hardtails with no shock at all are called rigid bikes. Recently, full-suspension bikes have become lightweight enough to fit into the cross-country category. Rather expensive, many of the reliable brands come complete with lock-outs on the shocks. With the lock-out on, this simulates a hardtail or rigid bike when the trail turns uphill. As downhilling is to downhill skiing, cross-country mountain biking is not unlike cross-country skiing and events (long cross-country and short course cross-country) are staged in the same manner.

Recreational Trails Program
Http://www.fhwa.dot.gov/environment/sttrail.pdf

There were over 1,000 miles of bike trails in operation in 1999.

In 1999, the Coalition for Recreational Trails (CRT), working in cooperation with the Federal Highway Administration (FHWA):

RTP Database Maintenance Projects Funding Summary

Project State	Number Projects	RTP Funding	Other Funding
Michigan	17	$872,400	$671,075

RTP Database Projects and Funding Statistics 1993-2000

Project State	Number New Projects 1999-2000	Number Total Projects	RTP Funding	Other Funding
Michigan	17	55	$2,982,601	$1,611,306

TRAIL USE

RTP Database Trail User Category Summary				
Trail User Category	Total thru 1999	% of all reporting	Total Thru 2000	% of 2,497 reporting
Hiking	625	56%	1,527	61%
Mountain Biking	474	43%	903	36%
Walking	427	38%	1,193	48%
Running	230	21%	653	26%
Equestrian	307	28%	554	22%
Cross Country Skiing	298	27%	548	22%
Snowmobiling	266	24%	460	18%
Paved Trail Biking	217	19%	498	20%
All Terrain Vehicle	214	19%	389	16%
Off Road Motorcycle	163	15%	315	13%
In-Line Skating			151	6%
Four-Wheel Driving	88	8%	145	6%
Snowshoeing	57	5%	166	7%
Paddling	14	1%	76	3%

MOUNTAIN BIKER CHARACTERISTICS

Mountain biking in the Chequamegon Area of Northern Wisconsin and Implications for Regional Development

University of Wisconsin-Extension 1997

Dr. N.R. Sumathi and David A. Berard

http://www.uwex.edu/ces/cced/publicat/bike.html

The average Michigan mountain biker is a 35 year old white male, college educated professional earning between $50,000 and $80,000 per year.

University of Wisconsin-Extension 1997

- Approximately 45% of mountain bikers on the trail system classify themselves as having advanced or expert skill levels while about 44% classify themselves as possessing average skills.
- More than 86% of the respondents indicated that mountain biking was an important or extremely important activity to them.
- Approximately 92% of respondents possess some post-secondary education.
- While survey respondents were of all ages, about 60% were between 25 and 40.

Riders are a distinct recreationist group characterised by younger male participants with professional-type backgrounds, an interest in `active' types of recreation, and a high degree of club involvement. Activity levels and relative experience levels are high, although experience is limited as mountain biking is only a recent development.

An increasing commitment of participants to mountain biking with increasing experience levels was shown by their investment in equipment, involvement in clubs, and patterns of outdoor activities.

This study has found that the annual willingness to pay by an average biker in Moab is $1483. Aggregating this across the sampled population (who visited Moab at least once) results in a total value of mountain biking in Moab of $1334 700 (900 x 1483).

The empirical estimates for average trip demand per person per season were 2.25 and 2.53 trips under truncated Poisson and truncated negative binomial models, respectively. Consumer surplus per person per trip for both models was approximately US $585. The total annual use value for mountain biking in the Moab area was US $1.33 million.

MOUNTAIN BIKING EATURES (the top three features)	TOTAL %	Beginners (combined)	Moderately experienced	Have much experience	Expert/very experienced
Speed/excitement/risk	**43**	17	**43**	**46**	**51**
Exercise/fitness workout	**42**	**59**	**48**	**44**	23
Appreciating views/scenery/nature	**38**	**47**	37	**39**	31
Exploring new areas	33	34	**42**	33	23
Riding/socialising with friends	33	**37**	34	33	30
Racing and race training	28	0	4	21	**44**
Physical challenge (hard riding)	24	12	24	26	27
Skill challenge (technical riding)	22	4	17	21	**41**
Developing and improving skills	15	5	22	15	11
Commuting around town/transport	7	17	8	9	7
Relaxation/easy riding/cruising	7	31	7	2	3
Peace/quiet/solitude	2	19	7	2	3
Overnight trips/touring options	2	4	1	4	4
Other	2	4	2	2	2

BIKE SALES
http://www.nbda.com

The Bicycle Council
There were 7,000 U.S. bike shops in 1998 and 6,000 in 1999.

Approximate retail value of the U.S. bicycle market was $ 5.4 billion in 1998.

Percentage of sales by category in 1999:

Mountain Bikes	32.0%	
Repair/Service	21.0	
BMX Bikes	13.5	
Hybrid Bikes	12.5	
Road Bikes	8.1	
Other	13.0	-clothing components, accessories

Average cost per bike sold is $ 317.

NBDA

Specialty Bicycle Sales
YTD August 2000

Category	2000	1999	Avg. Price
Mountain	43.10%	46.40%	$449.17
Youth	25.10%	27.50%	$205.94
Comfort	13.50%	8.70%	$337.83
Hybrid	11.50%	11.80%	$367.57
Road	3.85%	2.60%	$1,108.66
Cruiser	2.60%	2.60%	$296.78
Tandem	0.13%	0.12%	$1,069.36

Source: National Bicycle Dealers Association Retail Data Capture Program. Tracks sales of top 13 bicycle brands through panel of retailers.

The specialty bicycle dealer network is comprised of approximately 6,300 bicycle dealerships nationwide:

85% describe themselves as single-location/one owner operations.

70% are so-called “family” bike shops that offer a range of products.

25% concentrate on the high end, referred to as “pro shops.”

According to the NBDA's Cost of Doing Business Study (2000), the average specialty bicycle retailer has annual sales of about $456,000 per year. The average bicycle dealer's revenue is 48% bicycles, 37% parts and accessories, 8.2% bicycle repair, 1.1% bicycle rental, and 3.9% "other." The average store sells approximately 600 bicycles per year, carries several bicycle brands, and numerous accessories brands. Gross margins on bicycles average about 36%, though the break-even point has been shown to be 37.7% for the average store (the average "cost of doing business"). Margins on hardgoods are generally higher than those for bicycles (48% gross margin).

BIKE TYPES
Mountain Biker's Guide To Road Bikes
By Pete Ruckelshaus
http://www.bikindex.com/guru/mtnbikersroadguide.asp

- The "standard" road bike. This type of bike is really just made for riding on the road. They have a more upright geometry that yields a bike that has responsive handling.
- A "touring" bike. This type of bike is built for long distance touring with racks and panniers. These bikes are pretty laid back for comfort over long distances with heavy loads over a variety of road conditions. They also have a longer wheelbase which makes the bike more stable, and use wider tires which help improve ride comfort. Most touring bikes use a combination of parts (triple cranks, cantilever brakes, drivetrain) from both mountain and road bikes, and because of their wider tires and heavier duty construction they can be ridden on smooth dirt paths and gravel roads without problems.

- A cyclocross bike. 'Cross bikes share many of the touring bike's attributes, but are much more suited to riding off-road when desired. They use wide range gearing, cantilever brakes, wider tires and a sturdy frame, and also employ a higher bottom bracket which helps off-road clearance. I used to have a 'cross bike and used it quite a bit for riding both on and off road; while it was a compromise design, I never not found it to be bad in either type of riding. For riding on road, I mount a set of narrower, lighter tires (usually 700x28), and for riding off-road or for winter road riding, I will ride wider, combe tread tires like the 700x35 Continental Country Grip.
- A fixed gear bike. These are a "fringe" bike that are starting to gain in popularity, much in the same way as single speed off-road bikes. They have a single gear that does not freewheel, skinny tires, and can have no, one, or two brakes. They take a bit of getting used to, but are fun to ride, mechanically simple, and are a great way to improve your pedal stroke. Fixed gear bikes can be either retired track bikes or a multi-speed bike that was converted to a single speed. If you're going to convert an old road bike, chose one with horizontal rather than vertical dropouts, it'll make adjusting chain tension easier.
- A "hybrid". With a few exceptions, hybrids are a lower cost bike that are a true compromise between road and mountain bikes, value and performance. They share most of the features of mountain bikes - flat bars, cantilevers, wide range gearing, etc. - and use the larger diameter wheel normally found on road bikes.

GENERAL STATISTICS
Bicycle Dealers and Industry News - Statistics
http://www.bicycleretailer.com/bicycleretailer/images/pdf/statistics.pdf

Bicycle Council
Americans who ride bikes (16 years and older): 76.7 million
Children who ride bikes: 43 million
Male to female ratio of riders: 53% to 47%
Regular adult cyclists (average once a week): 25 million

Primary reason for bicycle usage:
Recreation: 82%
Fitness 26
Commuting 10
Racing 1

Required Equipment

Responsible Organized Mountain Pedalers (ROMP)
Beginner's Mountain Bike Info Guide
http://www.romp.org/rides/beginnerguide.html

The following equipment is required for safety.

- Bicycle – For off-road riding, it is recommended that you buy a true mountain bike, not a hybrid (one way to tell is that true mountain bikes should come with fat, knobby tires). Usually, an appropriately sized mountain bike will have at least 2 to 4 inches of room between the top of the frame and your crotch when you stand above the bike. Bikes with front or front and rear suspension are becoming more popular and more affordable. Suspension smoothes the bumps in the trail, increasing comfort and decreasing fatigue.
- HELMET – Buy one that fits right and wear it. Not only is a helmet required in many local parks, but it will save your life.
- Water – Carry two water bottles and cages, or one of the alternative water systems. You will lose a lot of water as you ride. Drink water to prevent dehydration.
- Appropriate clothing – Dress for the weather and riding conditions. The weather on the trail is often much different than where you live.
- Pump – get one to fit your valve type (Schraeder or Presta). Compact pumps are light, popular, and fairly efficient. Many adapt to either style of valve.
- Gloves – these will keep you from compressing nerves in your hand, getting blisters, and in the event of a fall, save your skin.
- Padded bicycling shorts – these are not only more practical on a bike than loose fitting shorts, the chamois prevents (ouch!) chaffing.
- Windbreaker or light jacket – for spring, fall or winter riding.
- Mountain bike shoes – you can ride in tennis shoes, but the soles are not stiff enough to provide enough comfort (pedals dig into soles) or power transfer. Try cycling shoes.
- Spare tube(s) – for when you get a flat on the trail, it's easier to replace the tube, then patch the flat one at home where it's cool and there aren't any flies.
- Patch kit – carry this for when you use your spare tube and later get another flat!
- Tire irons – you'll need these to help take your tire off in order to change your tube.
- Small screwdriver – for adjusting derailleurs.
- Small crescent wrench – for removing wheels without quick-release.
- Small metric wrenches 8, 10mm – For a number of uses.
- Allen wrenches – same as above. Get a good selection, and check them against the bolts on your bike.
- Rag – for wiping the grease off your hands.
- Chain tool – for fixing a broken chain. If you don't have it and you break your chain, you'll be walking.
- Spoke Wrench – for tightening loose spokes, or removing broken ones.
- First aid kit – to fix damage to riders.

- Sunglasses – to protect your eyes from both the sun and dust.
- Seat bag, fanny pack, or backpack – to keep all this stuff in.

MTB RELATED WEBSITE STATS

Market Segment Profile
http://www.clubmtb.com/club/market_segment.asp

Membership and active viewers

- 61% visit one or more times daily; 80% visit once per week
- 22 average page views per visitor
- "Ride Calendar" and "Photo Gallery" most visited sections

Viewers with money to spend

- 60% with HH income $25,000 - $74,999
- 10% with HH income over $75,000

Riding Frequency

- Average 3 days per weeks

Equipment expenditures demonstrate dedication to mountain biking

- 48% spent $1,000 or more in past 12 months
- 28% spent $500 - $999

Active catalogue and online shoppers

- 68% spent $100 or more in past 12 months
- 81% have, or intend to make, online purchase

Gender	Age	Education
Male (95%) Female (5%)	17 & under (10%) 18 - 29 (12%) 30 - 39 (54%) 40 - 49 (20%) 50 & over (4%)	Undergrad/Grad degree (47%) Some college (16%) Attending college (15%) HS graduate (7%) Attending HS (15%)

Demographics – http://www.dirtworld.com

Gender	Internet	DirtWorld.com
Men	58.70%	62%
Women	41.30%	38%

Age	Internet	DirtWorld.com
Under 18	8%	16%
19-25	10%	25%
26-35	22%	41%
35+	60%	15%

Education	Internet	DirtWorld.com
High School	2.80%	2%
HS Grad	12.20%	20%
College	33.60%	29%
Grad College	33.10%	34%
Post Grad	18.30%	15%

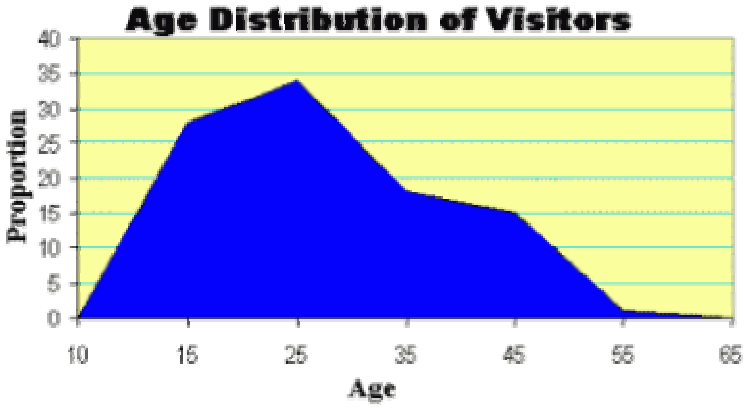
Income	Internet	DirtWorld.com
-20,000	5.70%	4%
20-40,000	15.50%	29%
40-60,000	22.80%	33%
60-100,000	37.00%	26%
100,000+	19.10%	8%

Dirt Bike Net Visitor Demographics

Each month Dirt Bike Net reaches up to 8,000 active mountain bikers.

Age Profile

Dirt Bike Net is a website that reaches a wide range of mountain bikers. The average age of Dirt Bike Net visitors is just over 27 years. The figure below shows the age distribution of visitors to Dirt Bike Net



Activity

Mountain bikers visit Dirt Bike Net. Eighty five percent of visitors to Dirt Bike Net have been riding in the four weeks prior to answering the survey.

Expenditure

Visitors to Dirt Bike Net are very committed to the sport in terms of investment. In the four weeks prior to answering the survey, respondents spent on average $471.

Gender Balance

Ninety four percent of visitors to Dirt Bike Net are male. This huge male dominance is consistent with the gender distribution of mountain bikers (85% male[3]).

Appendix E:
Verbatim Responses to
Open-Ended Questions

Verbatim Responses to Open-Ended Questions

Question 6. What other outdoor activities do you participate in?

Adventure Racing (2)
Auto Racing
Backpacking (3)
Basketball
Body Board
Bodysurfing
Camping (5)
Carpentry
Caving
Climbing (3)
Cyclocross (2)
Dirt Biking
Diving
Fire Fighting
Fishing (7)
Flyfishing
Football
Golf (2)
Horseback Riding (2)
Hunting (11)
Ice Hockey (2)
Kayaking (4)
Lacrosse (2)
Motocross
Mountaineering
Outact_Specify
Paddling
Racquetball
Rescue Rappeling
Rock Climbing (8)
Rowing (4)
Sailing
Scuba Diving
Sculling
Shooting (3)
Snowmobiling
Snowshoeing (4)
Soccer (2)
Softball (2)
Surfing (2)
Swimming (6)
Tennis (2)
Trail Running (3)
Triathlon (2)
Triking
Ultimate (Frisbee)
Urban Biking
Volleyball (2)
Wakeboarding
Watch TV
Water Skiing
Weight Lifting
Weight Training (3)

Question 7. What benefits do you appreciate most about mountain biking?

Accomplishment
All above (2)
Because not everyone understands
Being able to ride with friends who don't road bike
Bike maintenance
Enjoy the challenge, nature, ability to go far... Fast, socialize
Exercise, outdoor activity, have fun
Fresh air
Fun
Gets me away from TV
Getting dirty
Health, socializing, outdoor enjoyment
It's hard and rewarding
It's just fun
Keeps me sane
Mechanics
Mental health
Pain
Stress relief
The high
The ride
Weight control

Question 9. What type(s) of bike(s) do you own?

Classic '60's
Schwinn
Commuter
Cruiser (3)
Downhill
Mountain Biking
Downhill Rig
Fixed Gear (6)
Folding Mtn Bike (2)
Freeride
Modified Trials
Single Speed (8)
Single Speed Road
Soft Tail
Suzuki RMX
Tandem (10)
Time-Trial
Track (2)
Triathlon

Question 10. What brand(s) of mountain bike(s) to you currently own?

Airborne (3)
Alpinestars
Anvil (2)
Barracuda
Bauer
Bianchi (5)
Bike Friday
Bontrager (5)
Bridgestone (4)
Brooklynmachineworks
Bsa
Caloi
Centurion (2)
Cilo
Colnago (2)
Cove
Dean
Devinci
Dirt Research
Dynoglide (Gt)Cruiser
Ellsworth (2)
Fat Chance (2)
Fuji
Haro (2)
IF
Independent Fabrication (2)
Intense (3)
Iron Horse
Jamis (3)
Karpeil
Kent
Kestrel
Khs (4)
Klein (7)
Kona (9)
Lemond
Litespeed (3)
Malvern Star
Marin (5)
Matt Chester
Merlin
Miyata
Monty
Nashbar (2)
Nevara
Nishiki
Norco Vps-3
Nouvadm
Pacific (4)
Panasonic
Park Pre
Pfiffer
Proflex
Quattroass (2)
Raleigh
Redline (2)
Ritchey (2)
Royce Union
Salsa
Santa Cruz (12)
Scott (3)
Serotta (2)
Seven
Slingshot
Softride
Soulcraft (2)
Spot Brand Ss
Standard
Steve Potts
Strong Frames Custom
Surley
Ti-Cycles
Titus (3)
Tomac (2)
Turner
Univega (2)
Ventana
Vitus
Voodoo (2)
Waterford
Wheeler
Yeti (3)

Question 13b. If you answered *YES or Depends*, which product categories do you research before you buy?

Accessories
All/Everything (15)
Bike Specific Clothing
Clothing (12)
Forks
Helmet (4)
Lights
Price
Protective Gear
Seats, Pedals
I Buy What My Sponsors Have, If Not I Shop for Prices

Question 14. Where do you research your purchase?

Ask Others, Bike Shop, Internet
Cycling Trade Shows, I.E., Interbike
Internet
Magazine
Other People, Bike Shop, Internet, Catalog
QBP, Its A Wholesale Catalog Or Call The Company Direct (I Work In A Bike Shop)
Trade Shows
Trial And Error

Question 15. Please indicate the three most important factors in your purchase?

Ability to do what it's supposed to do (2)
Appropriateness
Best deal found by research
Bike publication reviews
Build quality, visual inspection
Class of bike
Design
Does it do its job well
Durability (6)
Magazine reviews
Online reviews at mtbr.com
Performance (5)
Quality (5)
Design
Reliability (2)
Results of research
Reviews
Strength (freerider)
Uniqueness
Value (2)

Question 16b. If *YES*, please indicate which organization(s) you are currently a member of:

cycleing pei, canadian bike association,
Adventure Cycling, New England Mountain Biking Association,
Aspen Cycling Club,
Bicycle Trails counsil of the East Bay (CA)
Black Hills Mountain Bike Club
black hills mountain bike club. olympia, wa,
Bluegrass Cycling Club; USCF; NORBA,
Central Ohio Mountain Bike Organization,
Cherry Capital Cycling Club - Traverse City, MI + U.S.C.F., Rapid Wheelmen - Grand Rapids, MI + Past MMBA Northern Chapter President
combo,
COMBO/CAMBA,
Hisingen Cykelklubb, Göteborg, Sweden, Orange County Wheelmen, CA
I.M.B.A., S.O.R.B.A.(Southern Off Road Bicycle Association), Chattanooga Bicycle Club(2)
IMBA, NEMBA,
IMBA, ARR,
IMBA, Central Ohio Mountain Bike Organization (part of Ohio Mountain Bike Association),
IMBA, former MMBA member

IMBA, Iowa Coalition of Off Road Riders (ICORR),
IMBA, KMBA (Kickapoo Mountain Biking Association
IMBA, Kona Clump,
IMBA, LAB,
IMBA, MMBA (4)
IMBA, NORBA, USCF, ABR,
IMBA, OMBA, Wittenberg U. Cycling Club
IMBA, USCF
IMBA, Warrior's Society, Share
IMBA, Western PA Wheelmen
IMBA, WNYMBA, ICBM (club,
IMBA, NORBA (2)
Kalamzoo Bicycle Club/ MMBA,
Keweenaw Trekkers, Copper Country Cycling Club
LAB - Through affiliation with local club,
Local club. Was a 10 year NORBA member and 3 year USCF member, but fees increased outrageously and local races no longer require membership.,
michigan mountain biking association, copper country cycling club (secretary),
Michigan Mountain Biking Association, International Mountain Biking Association, Rails-to-Trails, League of Michigan Bicyclists,
MMBA- Michigan Mountain Bike Association, USCF- United States Cycling Federation
MMBA, MSU Cycling Team (2)
MTB Australia, Cycling Australia,
NCNCA,
NEBC, NEMBA, IMBA, NORBA,
NEMBA, IMBA,
NORBA, GHORBA, NWCC (Houston, TX),
NORBA, USCF (2)
NSMBA
OBRA, IMBA,
ORMBA, Ridge Riders,
Sask Cycling Association,
Silicon Valley Bicycle Coalition,
Spokejunkies,
Team Hartcore, ride hard, and thats all,
Texas Bicycle Coalition,
uscf crca,
USCF, IMBA and NORBA
USCF, NORBA (3)
USCF, NORBA, MMBA
Westchester Cycle Club, New York Cycle Club
Williamson County Rough Riders
WNYMBA, IMBA
wnymba, Imba, norba,

Question 18b. If YES, please indicate which sport this organization is concerned with.

Adventure Racing
Boating
Climbing (2)
Dirt bike club
Golf (2)
Horses
Hunting (4)
Ice hockey
Lacrosse (2)
Mountaineering
NASCAR
NRA (2)
Paddlesports
Rock climbing (4)
Rowing (2)
Sailing
Scuba diving
Shodokan
Snowmobiling (2)
Soccer
Soft ball
Swimming (2)
Tennis
Triathlon (4)

Question 29. In what state do you reside (if within the United States)?

Michigan
Alabama
Arizona
Arkansas
California
Colorado
Connecticut
Delaware
Florida
Georgia
Illinois
Indiana
Iowa
Kansas
Kentucky
Louisiana
Maine
Maryland
Massachusetts
Minnesota
Nevada
New Hampshire
New Jersey
New York
North Carolina
Ohio
Oregon
Pennsylvania
Rhode Island
South Carolina
South Dakota
Tennessee
Texas
Utah
Virginia
Washington
Wisconsin
Wyoming

Question 30. In what country do you reside (if outside the United States)?

United States
Canada
Australia
Barbados
India
Italy
New Zealand
United Kingdom

Appendix F:
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