OUTDOOR RECREATION ACTIVITY TRENDS BY VOLUME SEGMENTS: U.S. AND NORTHEAST MARKET ANALYSES, 1982-1989

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The purpose of this review was to examine volume segmentation within three selected outdoor recreational activities -- swimming, hunting and downhill skiing over an eight-year period, from 1982 through 1989 at the national level and within the Northeast Region of the U.S.; and to determine if trend patterns existed within any of these activities when the market size and market volume of infrequent and frequent segments were examined. Different trends exist between national and Northeast Regional trends when volume segmentation was examined. Implications and discussion points were provided. Keywords. Volume segmentation, swimming, hunting, downhill skiing, marketing, Northeast U.S., outdoor recreation, and activity trends.

Introduction

With the advancement of the recreation field in the last decade has come the increased interest in the topic of marketing recreation activities and amenities. This interest has also been fueled by the growth in travel and tourism and an increasing variety or recreational products and services. In recent years, there has been substantial growth in a variety of outdoor recreational activities. These include golf, wind surfing, cross country skiing, and fly-fishing plus the introduction of new pursuits such as snowboarding, mountain biking, and "roller-blade skating." However, in other outdoor activities the growth of activity participation has either remained stagnant or actually declined. These activities include swimming, power boating, and snowmobiling to name a few. Furthermore, regional economic downturns, budget and international crises, such as the Persian Gulf Conflict, have had negative impacts upon recreational businesses and tourism areas. Given all of these changing conditions, the implementation of marketing strategies and the monitoring of trends has become critically important for those agencies and businesses which depend on selected outdoor recreational activity pursuits either directly or indirectly. Growth cycles change rapidly and more innovative market approaches are necessary. Kelly (1988) and others (Warnick and Loomis, 1990; Schwaninger, 1989) have conducted work which serves to predict future recreation participation. Others have also found that national activity trends are not necessarily reflected at the regional level (Warnick and Vander Stoep, 1990). Nevertheless, more detailed analyses of recreational activity trends are needed at the national, regional and local levels.

To understand the nature of recreational activity trends and participation, two major components of activity demand must be understood. First there is the "number of people who participate in the activity." This statistic is called "market size." Often, much is made of this statistic; however, in and of itself it is somewhat less meaningful than a statistic which more specifically quantifies demand. "Participation days" or "times played" is a much more meaningful statistic for recreation agencies and businesses. This addresses the actual volume or amount of people who pass through the area or facility or who play the activity any number of times. It is referred to as "market volume." In marketing, business volume when examined by groups is described as a form of user or behavioral segmentation and is called "volume segmentation." Volume segmentation is the examination of usage rate and size of specific markets within an activity or product category. Romsa and Girling (1978) wrote one of the more definitive articles on volume segmentation of recreational activities. Others have alluded to the market concept called the 20-80 rule (which indicates that a small portion of all customers comprise a large portion of all business transactions). Warnick and Vander Stoep (1990) have indicated that there are regional differences for many recreational activities. However, their review of selected activities did not focus on participation volume. Consequently, the review of participation volume within selected activities in the Northeast was undertaken.

Purposes of Study

The purposes of this study were two-fold: 1) to examine volume segmentation within three selected outdoor recreational activities -- swimming, hunting and downhill skiing over an eight-year period, from 1982 through 1989; and 2) to determine if trend patterns exist within any of these activities when the market size and market volume of infrequent and frequent segments were examined.

Methods

For the analysis of volume segmentation of these activities, data were drawn from *Study of Media and Markets* (Simmons Market Research Bureau, Inc., 1982-1989). These annual market studies were stratified, national random probability samples for each year from 1982 through 1989. The methods included the distribution of self-administered questionnaires and follow-up telephone interviews. Sample sizes ranged from approximately 15,000 to 20,000 adults. The sample statistics were then extrapolated to the U.S. adult population of 18 years of age and older. The activities in this review were selected because they represented outdoor seasonal events and the data were available and complete over this period of time by segments and by region for each activity. The data were made available through Simmons Market Research Bureau of New York and the University of Massachusetts Library.
Definitions of terms are important here and must be read carefully. The way segments are described can be confusing; so, please read carefully and use caution in use of these data. The terms are explained as follows. First, use segments or volume patterns at the national level were defined by three groups: 1) "Light Users" -- those that participated 1 to 4 days during the 12-month period; 2) "Moderate Users" -- those that participated 5 to 19 days during 12-month period; and 3) "Heavy Users" -- those that participated 20 or more days during 12-month period. These definitions of activity demand as provided by Simmons Market Research Bureau do provide stable trend data on an annual basis; however, they are not linked to demographic or regional distributions of demand.

Simmons Market Research Bureau does provide demographic definition and regional distribution of all activity participants and frequent participants (i.e., "those involved in the activity more frequently based on an activity play level.") However, the detailed definition of this group, the frequent segment or "those involved more frequently," varies from activity to activity. For the purposes of this study, within each activity, frequent and infrequent groups were defined. Knowing the overall national

and regional activity population as detailed by demographics and regional distribution, one can extrapolate to an infrequent user group. In this review for swimming -- frequent swimmers are those who swim 20 days or more per year and infrequent swimmers are those who swim less than 20 days per year. For hunting, frequent hunters are those who hunt 10 days or more per year and infrequent hunters those who hunt less than 10 days per year. For downhill skiing, frequent skiers are those who ski five days or more per year and infrequent skiers those who ski less than five days per year. Please note the use of different terms here -- frequent and infrequent versus light, moderate and heavy users. Infrequent participants are not the same group as light users. For swimming, infrequent swimmers are those who swim less than 20 days per year and light swimmers are those who swim one to four days per year. Differences in these definitions must be carefully considered when reviewing the findings for each of these activities. Light, moderate, and heavy represent volume groups are described at the national level only and are a more refined segmentation of the infrequent and frequent groups. But, it was not possible to examine these segments at the regional level due to the way Simmons Market Research Bureau presented the data.

Other definitions used in this study include: a) "Volume or Participation Days" -- an estimate of the number of activity occurrences, the medians were used from each grouped category (1 to 4 days; 5 to 9; 10 to 14; 15 to 19; 20 to 24; 25 to 29; 30 to 39; 40 to 49; 50 to 59; and 60 or more) times the number of participants who indicated playing at this level; b) "Market Size" -- the total number of adults (18 years of age and older) who played the activity in the previous 12 month period for the year; c) "Average Annual Growth Rate" -- the percent change in terms of the size of the market or participation calculated as a percentage; derived by taking current year number (market size or market volume) subtracting previous year number and dividing by the previous year number; percent change from year to year was then averaged over the study period; d) "Average Size" -- the percent distribution of participants by user group in terms of number of players and number of activity days averaged over the study period; e) "Days Played Per Year" -- the volume or participation days divided by total number of participants per segment; f) Market Share -- percent of all volume played within a specific region (which are defined as Northeast, South, Midwest, and West); g) Northeast Region -- includes the states of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, Pennsylvania, and New Jersey; and h) "Moving Average (MA) 3-Point Change" -- a moving average trend calculation based on a three-point moving average where change is calculated based on increments of three year averages (i.e., 1982, 1983, and 1984 would be used to determine a 1983 average; 1983, 1984, and 1985 would be used to determine a 1984 average, etc.). Changes were then determined by developing moving averages for three year periods from 1983 through 1988. Moving averages are used in trend extrapolations to smooth the effects of short-term variation and to provide the opportunity to construct trend patterns (McClave and Benson, 1982).

Selected Findings

The findings from this review are presented by activity with reference first to the national trends and then presentation of the regional findings from the Northeast. The summary of national trends by total participants and participation days; and light, moderate and heavy users for each activity are summarized in Table 1.

Swimming

National Trends. Swimming is an activity which has declined nationally in market size over this time period. Approximately 51 million people swam at least once per year in 1982; but, by 1989 only 47 million swam. The activity has decreased in market size at an average yearly rate of one-half (.5) percent and at a 3-point moving average rate of 1.4 percent. However, swimming was not in a steady decline throughout this period. Swimming, in terms of both numbers of participants (market size) and participation days (market volume) actually grew during the first half of this period. Swimming peaked in market size (53.7 million swimmers) and market volume (1.0 billion swimming days) in 1985. After that year, there was rather steady decline. On average at the national level, the heavy swim segment accounts for 35 percent of the all swimmers, but nearly 73 percent of swimming activity. When light, moderate and heavy segments were examined over time, the only user segment which grew from 1982 through 1989 was the light segment. The number of light swimmers and swimming days among this group grew at an average annual rate of two percent per year.

Northeast Trends. The market size of swimmers in the Northeast has declined also, but at a higher rate. In 1982, 11.8 million swimmers were from the Northeast and in 1989 the number equalled 8.9 million. However, the market size did not continually decline throughout this period. The swimming market actually grew in size in the Northeast from 1982 through 1984 when it peaked at 12.9 million swimmers. Since 1984 it has declined in size. The Northeast market is down 3.6 percent per year at an annual average rate and at a 3-point moving average rate of three percent. Participation days are also declining in the Northeast. At the peak in 1983, nearly 304 million swimming days occurred, but this declined to as low as 182.9 million days in 1987 and in the most recent years examined here (1988 and 1989) settled at approximately 204 to 205 million days. Furthermore, the market share of swimmers who reside in the Northeast has also decline. The Northeast's share of all swimmers peaked in 1983 at 26.2 percent and declined throughout the remainder of the period and in 1989 stood at 18.7 percent.

When the distribution of frequent and infrequent swimmers was examined additional insights into activity trends within the Northeast were found. The distribution of frequent and infrequent swimmers in the Northeast is different than the distribution at the national level. In ever year examined here, the distribution of infrequent swimmers in the Northeast is less than at the national level. For example in 1982, 74 percent of all swimmers at the national level were infrequent swimmers while slightly less than 70 percent (69.6 percent) of all swimmers in the Northeast were infrequent swimmers. At the national level, there was an indication that an increasingly smaller distribution of all swimmers were infrequent participants. In 1982, 74 percent were infrequent swimmers and by 1989 only 64 percent were infrequent swimmers. The trend has been somewhat similar in the Northeast, but the actual distribution is markedly different. Approximately 70 percent of all swimmers in the Northeast were infrequent swimmers in 1982. In 1989, only 53 percent were infrequent swimmers. While this is revealing, the other segment, the frequent swimmer group is accounting for a larger portion of the swimming types and this segment actually grew slightly -- at an average annual rate of about three percent and at a 3-point moving average rate of one-half (.5) percent. The national trends indicate a stronger growth pattern within the frequent segment. This segment grew at an average annual rate of 5.1 percent and at a 3-point moving average rate of three percent.

Table 1. Swimming, Hunting and Downhill Skiing by Light, Moderate and Heavy Volume Segments at the National Level: 1982 through 1989.

	Year	Distribution of Participants ('000) and Participation Days ('000) by Volume Segment Levels)														Ave. Size of		Ave. Annual	
		1982		1983		1984		1985		1986		1987		1988		1989		Parts. and Part. Days		Change (%)	
Swimming	Volume Segments	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Ave.% Part.	Ave. % Day	Parts.	Part. Days
	Light (1-4 days)	10,114	27,814	9,873	27,151	10,985	30,209	12,035	33,096	11,039	30,357	11,740	32,285	11,138	30,630	11,423	31,413			2.0%	2.0%
	Percent Light Participants	20%	3%	21%	3%	21%	3%	22%	3%	23%	4%	25%	4%	27%	4%	24%	3%	23.0%	3.4%		
	Moderate (5-19 days)	22,558	248,236	19,958	219,106	22,340	241,120	22,742	246,169	21,310	227,840	20,555	222,195	13,206	108,410	19,029	195,732			0.1%	2.8%
	Percent Moderate Participants	44%	25%	43%	25%	43%	24%	42%	24%	44%	26%	44%	28%	32%	14%	40%	21%	41.7%	23.5%		
	Heavy (20+ days)	18,381	712,706	16,581	614,814	18,916	734,762	18,890	730,407	15,775	607,257	14,298	548,262	16,294	657,087	16,975	691,048			-0.5%	0.5%
	Percent Heavy Participants	36%	72%	36%	71%	36%	73%	35%	72%	33%	70%	31%	68%	40%	83%	36%	75%	35.3%	73.1%		
	Totals Size and Days ('000)	51,053	988,756	46,412	861,070	52,241	1,006,091	53,667	1,009,672	48,124	865,454	46,593	802,742	40,638	796,126	47,427	918,194			-0.5%	-0.4%
Ski (DHill)	Volume Segments	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Ave.% Part.	Ave. % Day	Part.	Part. Days
	Light (1-4 days)	3,376	9,284	3,396	9,339	3,814	10,489	3,691	10,150	4,031	11,085	3,815	10,491	4,086	11,237	4,006	11,017			2.7%	2.7%
	Percent Light Participants	50%	18%	50%	16%	53%	20%	48%	16%	56%	21%	52%	19%	57%	23%	50%	17%	52.0%	18.5%		
	Moderate (5-19 days)	2,815	27,750	2,654	27,348	3,092	30,869	3,287	34,479	2,707	25,414	2,924	30,188	2,756	23,776	3,363	31,758			3.4%	4.0%
	Percent Moderate Participants	42%	52%	39%	47%	43%	59%	43%	53%	38%	48%	40%	53%	38%	48%	42%	48%	40.6%	51.0%		
	Heavy (20+ days)	544	15,838	762	21,923	330	11,210	660	20,211	444	16,896	543	16,182	370	14,534	628	23,230			15.8%	14.1%
	Percent Heavy Participants	8%	30%	11%	37%	5%	21%	9%	31%	6%	32%	8%	29%	5%	29%	8%	35%	7.4%	30.6%		
	Totals Size and Days ('000)	6,735	52,872	6,812	58,610	7,236	52,567	7,638	64,840	7,182	53,395	7,282	56,861	7,212	49,547	7,997	66,005			2.6%	4.7%
Hunting	Volume Segments	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Parts.	Part. Days	Ave.% Part.	Ave. % Day	Parts.	Part. Days
	Light (1-4 days)	3,190	8,773	3,929	10,805	3,214	8,839	3,713	10,211	4,574	12,579	3,165	8,704	3,208	8,822	2,924	8,041			0.8%	0.8%
	Percent Light Participants	25%	5%	32%	7%	27%	5%	31%	6%	34%	7%	27%	5%	26%	5%	22%	4%	28.2%	5.4%		
	Moderate (5-19 days)	6,405	66,425	5,635	61,015	5,695	60,850	5,511	60,097	6,087	65,554	5,930	62,870	5,898	62,595	6,333	63,511			0.1%	-0.5%
	Percent Moderate Participants	51%	37%	46%	37%	49%	35%	46%	37%	45%	37%	50%	35%	48%	33%	49%	31%	48.0%	35.2%		
	Heavy (20+ days)	3,000	104,750	2,670	94,339	2,794	103,036	2,650	92,253	2,798	97,702	2,771	106,508	3,101	119,608	3,775	135,161			3.8%	4.1%
	Percent Heavy Participants	24%	58%	22%	57%	24%	60%	22%	57%	21%	56%	23%	60%	25%	63%	29%	65%	23.8%	59.3%		
	Totals Size and Days ('000)	12,595	179,947	12,234	166,158	11,703	172,724	11,874	162,561	13,459	175,835	11,866	178,081	12,207	191,025	13,032	206,713			0.8%	2.2%

Source: Simmons Market Research Bureau, Inc. 1982 through1989; New York.

Table 2. Swimming Trends in the Northeast for Infrequent(a) and Frequent(b) Segments: 1982 through 1989.

Year	Overall Size ('000)	Overall Ave. Days	Overall Part. Days ('000)	Northeast Size ('000)	Northeast Share	Northeast Ave. Days	Northeast Part. Days ('000)	Nat. Infreq. Size ('000)	National % Infreq.	NE Infreq. Size ('000)	Northeast % Infreq.	National Freq. Size ('000)	National % Frequent	NE Freq. Size ('000)	Northeast % Frequent
1982	51,053	18.55	947,174	11,870	23.3%	22.97	272,638	37,845	74.1%	8,256	69.6%	13,207	25.9%	3,614	30.4%
1983	46,412	19.26	893,832	12,150	26.2%	22.23	270,087	34,814	75.0%	8,568	70.5%	11,598	25.0%	3,582	29.5%
1984	52,241	19.37	1,011,764	12,985	24.9%	23.45	304,510	37,928	72.6%	8,792	67.7%	14,310	27.4%	4,193	32.3%
1985	53,667	18.81	1,009,672	12,870	24.0%	19.68	253,312	34,778	64.8%	7,975	62.0%	18,889	35.2%	4,895	38.0%
1986	48,124	17.98	865,454	11,668	24.2%	18.10	211,155	32,349	67.2%	7,800	66.8%	15,775	32.8%	3,868	33.2%
1987	46,593	17.23	802,742	10,039	21.5%	18.23	182,993	32,294	69.3%	6,629	66.0%	14,299	30.7%	3,410	34.0%
1988	40,638	19.59	796,126	10,738	22.5%	19.01	204,153	31,382	65.8%	6,612	61.6%	16,294	34.2%	4,126	38.4%
1989	47,427	19.36	918,194	8,879	18.7%	23.08	204,951	30,451	64.2%	4,707	53.0%	16,975	35.8%	4,172	47.0%
Ave. Annual Inc/Dec	-0.5%	0.8%	0.0%	-3.6%	-2.6%	0.7%	-3.3%	-2.9%		-7.0%		5.1%		3.2%	
Moving Average 3 Point Change	-1.4%	-0.2%	-1.7%	-3.0%	-2.3%	-1.7%	-4.8%	-6.8%		-8.0%		3.0%		0.5%	

(a) Infrequent Participants -- swim less than 20 days or more per year
(b) Frequent Participants -- swim 20 days or more per year
(Source: Simmons Market Research Bureau, Inc. 1982 to 1989, Volume P-10, Sports and Leisure.)

The overall Northeast swimming market has declined in size and most of the decline appears to be the result of simply fewer new, infrequent swimmers and a number of infrequent swimmers who have stopped swimming. However, the swimming market in the Northeast has become increasingly configured by a higher distribution of frequent swimmers. The average number of swimming days per swimmers actually increased from 1986 through 1989, from 18.1 days per swimmer to 23.1 days per swimmer -- an increase of nearly five days per swimmer. Compared over the same time period at the national level, the average number of swimming days per swimmer changed only modestly from 17.9 days in 1986 to 19.4 days in 1989 -- an increase of only 1.5 days per swimmer. (See Table 2.)

Hunting

National Trends. Hunting is a relatively stable activity nationwide. The overall market is growing at an annual average rate of less than one percent per year (3-point moving average rate of two-tenths of a percent). Hunting activity days are up though -- nearly two percent per year (3-point moving average rate of 1.3 percent). Approximately 12.5 million people hunted at least once per year in 1982 and by 1989, 13 million hunted. Hunting should not be characterized as a stable activity over this period. In terms of market size, it declined from 1982 through 1984 and has since rebounded in terms of both market size and volume. The number of hunting days alone increased from 162 million in 1985 to 206.7 million days in 1989. On average at the national level, the heavy hunting segment accounts for 24 percent of the all hunters and 59 percent of all hunting activity. When light, moderate and heavy segments were examined over time, the only user segment which grew substantially from 1982 through 1989 was the heavy hunting segment. The number of heavy hunters and hunting days among this group grew at an average annual rate of nearly four percent per year.

Northeast Trends. Hunting is the Northeast is for the most part stable; but, there is evidence of fluctuations both up and down in the activity. The market size for hunters in this region remained at approximately 2 million in 1989 (it was at 2.0 million in 1982). It was as high as 2.4 million in 1983 and as low as 1.6 million in 1988. The average number of hunting days has increased slightly, but remains between 15 and 16 days per year. There were no dramatic changes in the number of frequent and infrequent hunters which reflect strong growth or decline trends. The distribution of hunters in the Northeast reveals a market configured by higher distribution of frequent hunters and a slightly higher average number of hunting days per hunter per year. During this time period, the distribution of frequent hunters at the national level only twice exceeded 50 percent (in 1983 -- 50.1 percent and in 1985 -- 51.7 percent); however, the distribution in the Northeast was substantially different. Only once did the distribution of frequent hunters drop below 50 percent (in 1989 -- 49.2 percent) in the Northeast. The distribution has normally been above 53-54 percent and has been as high as 60 percent (in 1984). Nevertheless, in the Northeast, there has been a decline in the number of frequent hunters. (See Table 3.)

Downhill Skiing

National Trends. Skiing is an activity which has grown modestly for most of the 80s. Approximately 6.7 million people downhill skied at least once per year in 1982 and by 1989, 7.9 million skied. The overall average annual growth rate in market size was 2.6 percent and for participation days 4.7 percent. The growth in skiing appears to be largely accounted for by the growth in the heavy use segment. While, all segments grew in the skiing market, the heavy segment grew the most. The average annual growth rate for market size was nearly 16 percent and for participation days was slightly over 14 percent. But, these statistics are misleading. The changes were the result of uneven, year-to-year fluctuations and not necessarily sustained, consistent growth. For example, the year-to-year numbers and percent changes for the heavy user ski market for a few years indicate the magnitude of these fluctuations: there were 544,000 heavy skiers in 1982, 762,000 in 1983 -- 40 percent increase from 1982; 330,000 in 1984 -- 56.7 percent decrease from 1983; 660,000 (1985) -- an 100 percent increase from 1984, etc. These fluctuations make it more problematic to monitor and predict trends for downhill skiing. The fluctuations in the activity are most noticeable when the moving average statistics were examined. This statistic reveals little growth in downhill skiing during this period -- a small 1.2 percent growth in market size and a .9 (less than one percent) percent growth in skiing days. On average, the heavy skier segment (those who ski 20 or more times per year) accounts for only 7.4 percent of all skiers and 30.6 percent of all skiing segments. The bulk of skiing is accounted for by the skier who skis 5 to 19 times per year. They comprise 40.6 percent of all skiers and 51 percent of all skiing days.

Northeast Trends. The Northeast downhill ski market was characterized by a large increase in the number of skiers in the last two years of this report period. The overall market size more than double from 1987 to 1988 and even grew more in size in 1989. Here again the moving average statistic is probably a better indicator of the changes in the activity for the region; however, this number also reveals substantial growth of over 5 percent increase in market size per year and 5.5 percent growth per year in market volume (skiing days). The Northeast share of all downhill skiers exceeded 42 percent in 1988 and 1989. However, even though the market size and volume increased due to this surge in the late 80s, the average number of skiing days per skier in the region did not change. The number of skiing days per skier in the region remained around seven to eight days per year.

The distribution of frequent and infrequent skiers in the Northeast is somewhat different from the national distribution. In the Northeast, on average over the time frame examined here the distribution in numbers was about 50-50. About 50.1 percent are frequent skiers and 49.9 percent are infrequent skiers. This compares to 52 percent infrequent skiers and 48 percent frequent skiers at the national level. While both segments of the ski market in the Northeast appear to have grown substantially, this is largely due to the large increases in the 1988 and 1989. The average annual increase for infrequent skiers in the region was 19.9 percent (3-point moving average change of 6.8 percent) and for frequent skiers, the average annual increase was 17.6 percent (a 3-point moving average change of 8.4 percent). (See Table 4.)

Discussion

Trends are evident in these three recreational activities. Furthermore, more insights into an activity may be gained by examining carefully the regional and volume segments of the activity. National trends are not always reflected in the regional statistics. For example, in swimming, the trend patterns were similar in some market conditions at the national and Northeast levels. The infrequent swimmer markets were declining in size and the frequent swimmer markets were increasing in size in both the U.S. and the Northeast. But, the distributions of frequent and infrequent swimmers were very different. The difference between the distribution of frequent and infrequent markets was more distinct in the Northeast than at the national level. There was a higher proportion of frequent swimmers in

Table 3. Hunting Trends in the Northeast by Infrequent(a) and Frequent(b) Volume Segments: 1982 through 1989.

Year	Overall Size ('000)	Overall Ave. Days	Overall Part. Days ('000)	Northeast Size ('000)	Northeast Share	Northeast Ave. Days	Northeast Part. Days ('000)	Nat. Infreq. Size ('000)	National % Infreq.	NE Infreq. Size ('000)	Northeast % Infreq.	National Freq. Size ('000)	National % Frequent	NE Freq. Size ('000)	Northeast % Frequent
1982	12,595	14.29	179,947	2,001	15.9%	15.18	30,382	6,481	50.1%	937	46.8%	6,112	49.9%	1,064	53.2%
1983	12,234	13.58	166,158	2,441	20.0%	14.85	36,257	6,405	49.9%	1,117	45.8%	5,830	50.1%	1,324	54.2%
1984	11,703	14.76	172,724	1,888	16.1%	16.76	31,651	5,849	52.7%	756	40.0%	5,854	47.3%	1,132	60.0%
1985	11,874	13.69	162,561	2,019	17.0%	15.42	31,132	6,204	48.3%	874	43.3%	5,670	51.7%	1,145	56.7%
1986	13,459	13.06	175,835	1,798	13.4%	15.16	27,254	7,263	56.1%	772	42.9%	6,195	43.9%	1,026	57.1%
1987	11,866	15.01	178,081	1,733	14.6%	16.35	28,329	5,892	52.4%	747	43.1%	5,974	47.6%	986	56.9%
1988	12,207	15.56	189,931	1,663	13.6%	15.99	26,586	6,001	56.6%	784	47.1%	6,206	43.4%	879	52.9%
1989	13,032	15.86	206,713	2,016	15.5%	15.58	31,416	6,456	50.1%	1,025	50.8%	6,576	49.9%	991	49.2%
Ave. Annual Inc/Dec	0.8%	1.8%	2.2%	1.3%	0.9%	0.6%	1.2%	0.5%		3.3%		1.2%		-0.2%	
Moving Average 3-Point Change	0.2%	1.3%	1.5%	-2.1%	-2.3%	0.3%	-1.7%	-0.3%		-1.1%		0.8%		-2.9%	

(a) Infrequent Participants -- hunt less than 10 times per year
(b) Frequent Participants -- hunt more than 10 times per year
(Source: Simmons Market Research Bureau, Inc. 1982 to 1989, Volume P-10, Sports and Leisure)

Table 4. Downhill Skiing Trends in the Northeast by Infrequent(a) and Frequent(b) Segments: 1982 through 1989.

Year	Overall Size ('000)	Northeast Size ('000)	Northeast Ave. Days	Northeast Part. Days ('000)	Nat. Infreq. Size ('000)	National % Infreq.	NE Infreq. Size ('000)	Northeast % Infreq.	National Freq. Size ('000)	National % Frequent	NE Freq. Size ('000)	Northeast % Frequent
1982	6,735	1,622	8.40	13,623	3,376	50.1%	726	44.8%	3,359	49.9%	896	55.2%
1983	6,812	2,396	8.16	19,558	3,396	49.9%	1,285	53.6%	3,415	50.1%	1,111	46.4%
1984	7,236	1,685	7.40	12,462	3,815	52.7%	865	51.3%	3,422	47.3%	820	48.7%
1985	7,638	1,808	8.64	15,623	3,692	48.3%	849	47.0%	3,947	51.7%	959	53.0%
1986	7,182	1,874	7.70	14,422	4,030	56.1%	1,006	53.7%	3,151	43.9%	868	46.3%
1987	7,282	1,459	7.81	11,396	3,816	52.4%	764	52.4%	3,466	47.6%	695	47.6%
1988	7,212	3,055	7.60	23,232	4,085	56.6%	1,491	48.8%	3,127	43.4%	1,564	51.2%
1989	7,997	3,362	8.54	28,721	4,005	50.1%	1,596	47.5%	3,993	49.9%	1,766	52.5%
Ave. Annual Inc/Dec	2.6%	18.0%	0.7%	18.8%	2.7%		19.9%		3.6%		17.6%	
Moving Average 3-Point Change	1.2%	5.4%	0.0%	5.5%	2.4%		6.8%		0.9%		8.4%	

(a) Infrequent Participants -- ski less than five (5) times year year
(b) Frequent Participants -- ski five (5) or more times per year
(Source: Simmons Market Research Bureau, Inc. 1982 through 1989, Volume P-10, Sports and Leisure.)

the Northeast. While there was growth at the national level for downhill skiing, the Northeast experienced a large increase in both market size and volume. The frequent hunter market increased slightly at the national level, but declined in the Northeast. Consequently, regional trends do not necessarily reflect national trends.

It is probably equally important to examine local trends where possible to determine if there are further differences. Local "hot spots" may not reflect the national or even the regional trends. A local market may also be either ahead of or behind the growth or decline curve. However, knowing the characteristics of the national and regional markets will help local agencies better understand and predict local changes. The market statistics do emphasize the need to monitor activities and participation volume carefully.

The causes of these changes in activity user segments are still unknown. The trends were followed and documented here, but no specific reasons were given by responses as to why their interest has changed nor has the study population been continually studied such as in a panel study. Many questions are still unanswered. Why has the swimming market declined in both size and number of swimming days? For example, do distinct differences between heavy and light users exist? How do these markets differ both demographically and psychographically? How depended are activity trends on resource conditions? These data do not address or answer these questions.

There is some evidence as to the factors that contribute to the decline or changes in activity participation. For example, one can see that the major reason swimming has declined in the Northeast is due to the decline in the infrequent swimming market segment. Those people who swim infrequently have either stopped swimming or no new large segments of individuals have taken up swimming. Furthermore, a core group of swimmers, those who swim frequently, remains strong in the Northeast; and, comprises more of the Northeast swim market. The average number of swimming days per swimmer has increased and appears to be fueled by the larger number of frequent swimmers. Swimming appears to have become a mature activity. There is no strong new influx of new swimmers, but a steady, growing market who desire to swim often and who are swimming more frequently.
"Segmentation change" over time is an important issue which also must be addressed. People who participate in recreational activities often change their rates of play. It is very possible that people who in one year played an activity very frequently might the following year not play the activity nearly as frequently. There are numerous speculative reasons: poor resource conditions (i. e., no snow for snow skiing); climatic changes for weekend participation; changing social conditions (i.e., adult family members who find participation affected by the presence of young children in the household), etc. Consequently, a decline in the frequent participation segment may be reflected by an increase in the size of the infrequent participation segment. This appears to be the case for hunting in the Northeast. The market size of the frequent hunting segment has declined while the infrequent hunting segment has increased in size. It is doubtful that frequent hunters have simply stopped hunting and new participants have taken up the activity to result in the growth in the infrequent segment. Rather, it is probably more likely that a number of frequent hunters have reduced their frequency of hunting and are now classified as infrequent participants.

While there is limited understanding as to why such conditions exist, a recognition of the strengths and limitations of the Simmons Market Research Bureau's data must be also considered. First, the data are representative of the U.S. adult population and are consistently collected on an annual basis in the same manner. This provides the opportunity to conduct on-going trend analysis. Unlike other activity trend studies which were conducted at best every five to ten years and which often use different methods and questions, the data provided here were collected on an annual basis using the same format and procedures.

Nevertheless, there are limitations to the data. First, the data are only available in summary tables which limits any type of detailed statistical analysis. Data may be manipulated to examine selected segments as was the case in this review; but, individual case-by-case data were not available. Some assumptions must also be made with the data. Statistics are often provide in grouped format in tables. One must assume for example when calculating activity days that the midpoint of a group category is representative of the distribution of activity days in the category. Also, in open-ended categories, the low-end of the category must be used in activity day estimates as the category is not framed by an upper range limit. Consequently, the assumptions made here about activity day participation may actually be conservative and under-estimate the entire size of the activity demand. Furthermore, Simmons draws a new sample each year in their studies. They do not survey the same 20,000 individuals each year or conduct panel surveys to follow individual changes over time. Rather, they project the market based on sample statistics. While there sampling procedures are highly sophisticated by stratification, weighting and over sampling techniques, there is the real likelihood that "sample bounce" may occur. "Sample bounce" is a condition where samples which reflect the true or actual mean of participation apear to fluctuate dramatically when presented over time. Sample meands often cluster around the true mean of the population; however, there are times when a more distance or outlying mean is used to represent the actual mean. The selection of certain sample means for each year or an individual year may create a condition referred to as "sample bounce." It is possible to control sample mean estimates if more samples were drawn; but, this is very costly especially with large national sampling techniques.

Recreation participation patterns are complex, dynamic and not always easily understood. This review of three selected activities by volume segmentation within the context of one regional market area sheds some new light on trends. Simply following national trends can be misleading. However, there are still needs for more closely monitoring recreational participation data.

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