ARE NEW HAMPSHIRE "NATIVES" DIFFERENT? A STUDY OF NEW HAMPSHIRE NATIVES AND THREE COHORTS OF IN-MIGRANTS TO NEW HAMPSHIRE

Robert A. Robertson,
Associate Professor
Department of Resource Economics and Development
University of New Hampshire,
317 James Hall/56 College Road,
Durham, NH 03824-3589.

Abstract: Social science research is often used by resource management agencies to "obtain a balanced view of the preferences and needs of individuals, communities, and special interest publics potentially affected by agency activities." This study explores the extent that those people who are born in New Hampshire (i.e., natives) are different from persons who moved to NH prior to 1970 (long time residents), during the 1970s and those who moved to the state during the 1980s and 1990s across twenty-one dependent variables of interest to outdoor recreation resource managers and planners. Five of the dependent variables were related to importance of and motivation for outdoor recreation, nine were related to participation in specific outdoor recreation activity packages, and seven measured attitudes towards specific outdoor recreation resource management programs and policies. This topic is investigated using survey data drawn from a random sample of persons licensed to drive in New Hampshire (n=928). This study concurrently considers the effect of the native/in-migrant cohort, and whether the residents currently live in a metro or non-metro county through the use of two-way analysis of variance including age of the respondent as a covariate. The results show that "natives" differ significantly from the in-migration cohorts across eight of the dependent variables. Residents of metro counties differed significantly from the residents on non-metro counties across seven of the variables. There were significant interactions between the native-cohort and metro/non-metro measure for four of the dependent variables. These results are interpreted within the context of both earlier/more recent research observations and outdoor recreation resource management.

Introduction

State and federal agencies responsible for the management of public lands are required to estimate and than consider the social effects of proposed resource planning and management actions. Outdoor recreation managers and planners in New Hampshire face some unique challenges in meeting this requirement. Some of these challenges relate to the fact that a majority of New Hampshire's outdoor recreation resources are located in the central and northern portion of the state, while a vast majority of the states population lies in the southeastern portion of the state. This puts managers in a difficult spot of trying to manage for outdoor recreation resources for those citizens who are in close proximity to the recreation resources and for those citizens who are in close proximity to the recreation resources and for those who represent the greatest proportion of the states population. This challenge is further compounded by the fact that New Hampshire State Parks, the primary manager of New Hampshire's public lands, is self-funded (i.e., the Division of Parks and Recreation can only spend that money which they generate in fees). Therefore managers are dependent on recreational users to pay as they go. This represents more of a challenge for residents of the non-metro part of the state, than it does for the residents of metro counties. The other major manager of public lands in New Hampshire, the U.S. Forest Service, faces a similar challenge. For example, the White Mountain National Forest is currently revising their ten-year management plan and a struggling to meet the needs of the local, while addressing the concerns of those from further away. The plan revision process is a politically charged one. These challenges are compounded by the lack of data available on the needs and expectations of the public.

Outdoor recreation planners and managers want and need to understand what "the" public wants. Outdoor recreation managers, like other managers of natural resources, are used to dealing with "specific" publics. For example, they know how to deal with environmental groups, extractive industries, and organized recreation groups, but they have a more difficult time of considering the wants and expectations of the more general public. Outdoor recreation managers have more recently become more sensitive to "media" generated concerns that suggest that some segments of the "public" are different from others in ways that are important to the resource management process. The concept of "cultural clash" over the management of natural resources in general and outdoor recreation opportunities in specific has attracted resource managers attention. Over the course of a three week period, the author of this paper received phone calls from representatives of the White Mountain National Forest, the Appalachian Mountain Club, the NH Division of Parks and Recreation and the Concord Monitor, asking essentially the same question, "Does where a person lives and how long they have lived there affect what they do in the outdoors and how they think natural resources should be managed?"

About this same time the Smith and Krannich (2000) article entitled "Culture Clash" Revisited: Newcomer and Longer-Term Residents' Attitudes Towards Land Use Development, and Environmental Issues in Rural Communities in the Rocky Mountain West," was published in *Rural Sociology*. I briefly explained this objectives and findings from this study and each asked if there was any data available that would shed light on this question with in the context of outdoor recreation management in New Hampshire. It happens that I did complete a statewide assessment of outdoor recreation in New Hampshire in 1997 and this study offered the potential to take a preliminary look at this topic. The data available did not allow for a direct comparison with Smith and Krannich (2000) paper, but their research did help frame a research question that was of interest to outdoor recreation managers. They were particularly interested in the differences between New Hampshire "natives", "old-timers" and "newcomers" in terms of outdoor recreation involvements and attitudes. Their primary motivation for seeking this type of data was an interest in social conflict over competing and conflicting use of natural resources for recreation and an interest if the national media portrayal of New Hampshire "natives" as quirky, eccentric and very conservative

holds true. A growing number of cars have "New Hampshire Native" bumper stickers (this is an addition to the state motto of "live free or die" which is a mantra for many) also served to spur resource managers' interest in this topic. A debate is underway that centers on the differences between "natives" and in-migrants. Are natives different from in-migrants in terms of the types of their motivations for outdoor recreation? Do natives participate in the same types of recreation activities?

The American Heritage Dictionary defines "native" as "originally" living, growing, or being produced in a certain place; indigenous to an area or region. The association between Are New Hampshire natives different is also common question around town halls where they are debating issues associated with wetlands and a variety of growth related issues in New Hampshire. These questions arise in urban areas as well as rural areas. There has been considerable debate about the differences between those people who live in metro counties (the southeasters tier) and those people who live in the rest of the New Hampshire. This study build on the substantial body of research focused on social conflict in rural in-migration (see Sorfranko and Williams, 1989; Wellmen and Moras, 1983; Williams and Jobes, 1990; Smith and Krannich, 2000 for a review) and conflict/competition in recreation settings (see Jacob and Schreyer, 1980 and Manning 1986 for a review).

This study concurrently considers the effect of the native/in-migrant cohort, and whether the residents currently live in a metro or non-metro county through the use of two-way analysis of variance including age of the respondent as a covariate. It focuses on identifying differences between persons who were born in New Hampshire and those who moved during three semi-distinct periods of population growth while considering the potential effects if any of whether the respondents primary residence is in a metro or non-metro county. The review of related research has fueled speculation that these groups will exhibit differences in motivations, behaviors, attitudes, values and preferences relative to the management and provision of outdoor recreation opportunities. If present it is possible that eventually these differences would represent competing demands for the management and development of outdoor recreation resources.

Research and Design Approach

Data Collection

Data for this study were drawn from a listing of persons licensed to drive in the state of New Hampshire during the fall of 1998. The sample was designed to be representative of households in New Hampshire and a check was made to insure that a household address only appeared once in the sample. Sixty-six percent of the questionnaires (n=2,000) were distributed via metered First Class mail. The other thirty-four percent of the questionnaires (n=1,000) were mailed via bulk mail. Both samples included two mailings of the survey and two post card reminders. Both mailings included a postage paid, pre-addressed return envelope. The response rates were consistent for both the First Class (30.75%, n=615) and the Bulk Mailing (31.3%, n=313). Eighty-two (4%) of the surveys were returned as undeliverable from the First Class mailing. The Bulk Mailing did not include the return of the undeliverable, so it was not possible to have a precise count of the undeliverable. Applying the rate of undeliverable from the First Class mailing to the Bulk Rate Mailing suggested an overall response rate of 33 percent (n=928).

Measures

This study utilized two independent variables measuring a native/in-migration cohort and a measure of the urban/rural nature of the county of current residence.

Native/in-migration. The native/in-migration variables were measured by taking the date of the respondents' birth by the number of years they have lived in New Hampshire. Those that equaled zero were categorized as natives (n=263), while those with non-zero values were grouped into one of three semi-distinct periods of development. These periods of development were computed by subtracting the year that they arrived in New Hampshire by the year of the survey (1998). This variable was than recoded into one of the following three periods of in-migration "moved to New Hampshire prior to 1970 (n=191)", the "moved to New Hampshire during the 1970s (n=169)" and "moved to New Hampshire during the 1980s and 1990s (n=267)". The study did not collect the information necessary to make a comparison between those in-migrants from rural versus urban areas. It is fairly clear that the single largest source of in-migrants into New Hampshire were from the Greater Boston Metropolitan area across each of the three cohorts. The period stretching from the post World War Two, through the 1950s and 1960s represented a period of steady growth in New Hampshire. The 1970s represented the period of most rapid growth throughout the state fairly evenly balanced between the in-migration to metro and non-metro counties. Figure 1 presents the number of cases for each of the Native/in-migrant cohort variables and the percent of each sample following into metro/non-metro counties. This figure closely approximates the distribution of native/in-migration into metro/non-metro counties.

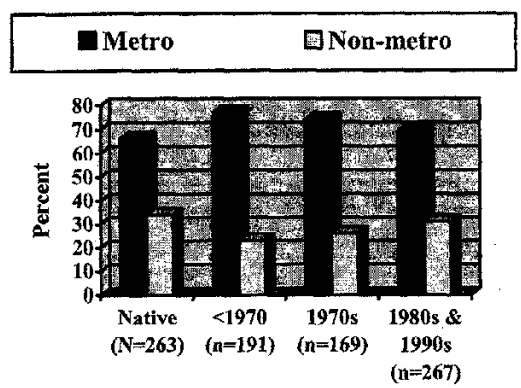

Figure 1. Distribution of Cases for Native/In-migrants and Metro/Non-metro County

Urban/Rural. Classifying New Hampshire's 10 counties as being either urban/metro or rural/non-metro in nature created the urban/rural variable. Hillsborough, Merrimack, Rockingham, Strafford located in the southeastern portion of the state includes 73 percent of the state population and occupy 32 percent of the

land. The average population per square mile of these four counties is 313.25. These respondents from these counties are considered urban/metro residents for the purposes of this study (n=653). Residents of the counties of Belknap, Carroll, Cheshire, Coos, Grafton, and Sullivan counties are considered rural/non-metro counties for the purposes of this study (n=253). The residents of this area occupy 68 percent of the land base of the state of New Hampshire while representing 27 percent of the population. The average population per square mile for this six county region is 69.16. This basic division of New Hampshire into two groups, urban/metro and rural/non-metro, is appropriate for this study since the primary goal of this research is to see if persons living in metro/non-metro counties have similar effects across the Native/In-migrant cohort variable.

Age of Respondent. A variable measuring the age of the respondent was included as a covariate. It was necessary to include age as a covariate since has been shown to influence participation in outdoor recreation and attitudes towards outdoor recreation management policies. Age is also significantly associated with the "prior to 1970" cohort since to move here during that time period required one to be at least 27 years old. Age was measured by asking "What is your age (in years)?". The respondents mean age was 47.77 years, the median was 47, and the mode was 50, with the standard deviation of 16.77.

Dependent Variables

The study considered five sets of dependent variables measuring different dimensions of the overall outdoor recreation experience. The first was a single measure that focuses on the "overall importance of outdoor recreation". The second set examined a commonly used set of measures of motivations for outdoor recreation. The third set considered a common set of management objectives for natural resources. The fourth considered two variables measuring spending priorities of interest to the managers and officials. The final set of dependent variables looked at a few specific policy issues identified as important by the managers.

Centrality of Outdoor Recreation. The first dependent variable measured in this study focused on the overall importance of outdoor recreation to the respondents. Respondents were provided with the following instructions "To what extent do you personally agree or disagree with following statements? Please check one box for each statement." Reponses ranged from "strongly agree", to "agree", to "neutral", to "disagree", to "strongly disagree". The statement was "Participation in outdoor recreation plays a central role in my life." The mean score on this statement was 3.668 wita standard deviation of 1.101.

Motivation for Outdoor Recreation. The first sets of independent variable are related to motivations to participate in outdoors recreation. The questionnaire provided the following instructions: "Listed below are a number of reasons why people participate in outdoor recreation activities. Please check the appropriate box for each response." Listings of fifteen potential motivations were provided to the respondents. Factor analysis of the responses yielded four interpretable and conceptually meaningful factors, which were tested for reliability. The four factors were labeled 1) social and adventure motivations (6-items, alpha=.8101); 2) escape and relaxation motivators (four items, alpha=.757); 3) outdoors with family and friends motivators (4-itmes, .665); and 4) exercise (1-item).

Participation in Outdoor Recreation Activities. The questionnaire provided the following instructions: "Listed below are a number of recreation activities that you or members of your household may participate in. Please indicate how many time (if any) that you or members of your household participated in these activities." Categories provided included "not at all", "1-3 times", "4-6 times", "7-10 times" and "over ten times". Adding the scores on the individual variables for variables that shared a common element (i.e., types of fishing, hunting, equipment, etc.) created the activity type participation variable. The following scoring criteria "not at all" was assigned a zero value, "1-3 times" was assigned a value of one; "4-6 times" was assigned a value of 2; "7-10 times" a value of three and "over ten times" a value of four. A total of eight scaled variables were created that captured different groupings of outdoor recreation activities. These were labeled 1) fishing; 2) hunting, 3) hunting and fishing; 4) motor sports; 5) active outdoors, 6) passive outdoors; 7) activities which require development; and total outdoor activities. A description of the groupings, the mean score and standard deviation on the grouping scale follows:

Fishing. There were five variables on the survey representing "fishing" activities, these were "freshwater fishing", "saltwater fishing", "ice fishing", "fly fishing" and "shellfish harvesting". The mean score on the fishing activity scale was 2.16 with a standard deviation of 3.98.

Hunting. There were five variables on the survey representing "hunting" activities; these were "bow hunting", "bird hunting", "small game hunting", and "large game hunting". The mean score of the hunting activity scale was 1.66 with a standard deviation of 3.56.

Hunting and Fishing. The hunting and fishing activity scales were added together to create a total hunting and fishing activity scale. The mean score on the hunting and fishing activity scale was 3.69 with a standard deviation of 5.53.

Motor Sports. There were five variables on the questionnaire that measure participation in some sort of motorized outdoor recreation activities; these were "off-road vehicle driving", "motor boating", "water skiing", "snowmobiling", and "atv/ohrv". The mean score on the power equipment" scale was 2.36 with a standard deviation of 3.30.

Active Outdoors. There were twenty variables on the questionnaire that measure participation in recreation activities that require active engagement in the outdoors, these were; "day hiking", "food gathering", "bicycling", "mountain biking", "canoeing, kayaking/rowing", "rock mountain climbing", "stream lake swimming", "ocean swimming", "sailing", "sea kayaking", "surfing", "diving snorkeling", "volunteer monitoring", "cross-country skiing", "horseback riding", "snow shoeing", backpacking", "gardening", "jogging/running/walking" "organized field trips" and "wind surfing" The mean score on the active in the outdoors scale was 9.73 with a standard deviation of 5.77.

Table 1. Factor Analysis of Management Objectives for Public Lands.

Factor Name, Item Content, and Proportion of Variation Explained	Loading
Factor 1: Resource Protection (alpha=.7538)	
To protect typical examples of NH's natural regions (e.g., lakes, northern forest, mountains).	.868
To protect plants and animals that are native to New Hampshire	.849
To protect areas of historical/archaeological interest.	.785
To provide opportunities for non-motorized outdoor recreation activities (e.g., hiking, backpacking, canoeing, etc.)	.537
To preserve & protect drinking water & groundwater recharge areas.	.502
Explained Variance: 28.414%	
Factor 2: Recreation and Tourism Development (alpha=.6678)	
To provide a source of revenue for the owners/managers of natural/cultural resources.	.757
To provide the opportunity of outdoor recreation activities which require a high level of development (e.g., downhill skiing, golf, tennis, hotel, condominiums).	.750
To attract tourists to New Hampshire	.747
To provide the opportunities for motorized outdoor recreation (e.g., motor boating, snowmobiling, jet skiing.)	.605
Total Explained Variance: 49.595%	

Passive Outdoors. There were seven variables on the questionnaire that measured involvements that outdoor recreation activities "wildlife observation", "driving for pleasure", "sightseeing", "picnicking", "drinking alcohol in an outdoor setting", "rafting/tubing", and "family gatherings". The mean score on the passive outdoors scale was 7.16 with a standard deviation of 4.71.

Requires Development. There were eight variables on the questionnaire that measured participation in recreation activities that requires some sort of bricks and mortar development; these include "snowboarding", "down hill skiing "camping in National Forest", "camping in State Parks" "camping at private camp grounds", "tennis/volleyball/golf", "outdoor education camps", and "outdoor spectator sports". The mean score on the "requires development" scale was 5.57 with a standard deviation of 4.00.

Total Activities. A total of sixty variables were included on the questionnaire that measured participation in outdoor recreation s. Fifty of these variable were incorporated into the seven previous recreation participation scales, those and an additional eleven variables were added together to create a total recreation activity scale. The ten activities not included in the previous scale were "nature study", "photography", "visit historic sites", "visiting museums", "attending special events", "farm visits", "outdoor pool swimming", "baseball/basketball/soccer","pick-your-own fruit/vegetables", and "playing on playgrounds". The mean score on the total activity scale was 48.15 with a standard deviation of 23.67.

Management Objectives. These sets of independent variables are related to respondents' preferences for specific, but potentially competing, objectives for the management of New Hampshire's natural resources. The respondent was provided with the following instructions: "How important is it to you, personally, that persons responsible for the management of New Hampshire's natural resources develop and maintain areas for the following purposes? Please check the appropriate box for each response." Responses ranged from "not important (0)" to "minor importance (1)" to "important (2)" to "very important (3)" to "most important (4)". A list of nine objectives for the management of New Hampshire's natural resources was provided. Factor analysis of the responses yielded two interpretable and conceptually meaningful factors, which were tested for reliability. Table 1 listed the items included in each factor along with its loading and corresponding alpha value. The two factors were labeled 1) resource protection; and 2) recreation and tourism development. The resource protection variable had a mean score of 3.99 with a standard deviation of 0.6927 and the recreation and tourism development variable had a mean score of 2.718 and a standard deviation of 0.8988

Topics of Interest

This section included a number of single variables that related to topics that are currently being debated relative to the independent variables. Two variables were drawn from a section of questionnaire focused on spending priorities and four variables were drawn a section entitled "Issues and Concerns".

Spending Priorities. This section focused on spending priorities. Respondents were provided with the following instructions "If you were to decide how future monies are spent within New Hampshire, would you identify each of the items listed below as a LOW, MODERATE, or HIGH priority? Remember that monies are limited, so if some projects are identified as a HIGH Priority, others must be identified as LOW or MODERATE priorities. (Please check the appropriate box)." Responses ranged from "Low (1)", to "Moderate (2)" to "High (3)". The first of the two topics examined from this section were "Wetland preservation/protection programs". This variable had a mean score of 2.20 and a standard deviation of 0.7125. The second variable was "Establishment/administration of carrying capacity for public lands and waters." This variable had a mean score of 1.733 and a standard deviation of 0.6582.

Issues and Concerns. This section focused on issues and concerns identified by resource managers and planners.

Table 2. Outdoor Recreation variable and univariate analysis of variance model controlling for age of the respondent.

Centrality and Motivations	Native/In-Mig. F-value	Metro/Non F-Value	Interaction F-Value	Age F-Value	Overall Model
Recreation--central to life	0.563 (.639)	1.064 (.303)	3.160 (.024)	14.33 (.000)	3.893 (.000)
Exercise	0.488 (.690)	1.373 (.242)	0.105 (.957)	0.129 (.719)	0.561 (.810)
Social	2.137 (.094)	1.930 (.165)	0.094 (.964)	1.573 (.213)	1.852 (.064)
Escape	0.117 (.950)	4.325 (.038)	0.748 (.524)	3.134 (.077)	1.098 (.362)
Family	1.000 (.392)	2.427 (.120)	1.211 (.305)	10.31 (.001)	2.124 (.031)
Recreation Activity Packages					
Hunting	5.230 (.001)	20.42 (.000)	0.336 (.799)	8.393 (.004)	6.711 (.000)
Fishing	4.025 (.007)	0.062 (.803)	0.234 (.873)	1.424 (.233)	2.121 (.032)
Hunt and fish	6.726 (.000)	9.116 (.003)	0.117 (.950)	6.863 (.009)	5.507 (.000)
Power equipment	5.718 (.001)	1.594 (.207)	0.651 (.583)	11.06 (.001)	5.283 (.000)
Non-power sports	1.159 (.325)	3.619 (.058)	0.576 (.631)	13.09 (.000)	2.416 (.014)
Active	2.732 (.043)	0.024 (.878)	0.356 (.785)	31.53 (.000)	5.834 (.000)
Passive	1.632 (.180)	0.872 (.351)	1.258 (.288)	0.113 (.737)	1.621 (.115)
Requires development	3.465 (.016)	2.664 (.103)	1.110 (.344)	81.29 (.000)	14.50 (.000)
Total activities	1.199 (.310)	1.680 (.196)	1.667 (.173)	31.22 (.000)	5.895 (.000)
Management Objective					
Environmental protection	2.095 (.099)	3.665 (.056)	4.520 (.004)	9.943 (.002)	3.299 (.001)
Recreation development	1.189 (.313)	0.453 (.501)	0.643 (.588)	1.009 (.316)	.8059 (.598)
Topics of Interest					
Wetland preservation/protection	7.000 (.000)	1.167 (.280)	2.820 (.038)	1.167 (.280)	3.190 (.001)
Carrying capacity	0.291 (.832)	9.853 (.002)	1.465 (.223)	0.017 (.896)	1.182 (.070)
Protection endangered species	2.014 (.110)	7.835 (.005)	3.358 (.018)	10.28 (.001)	3.812 (.000)
Non-residence fees	5.979 (.000)	.122 (.727)	1.950 (.122)	.565 (.453)	4.395 (.000)
Higher fees for recreation	3.793 (.010)	7.129 (.008)	0.134 (.883)	0.022 (.940)	2.56 (.008)

Respondents were provided with the following instructions "To what extent do you personally agree or disagree with following. statements? Please check one box for each statement.". Responses ranged from "strongly agree", to "agree" to"neutral", to "disagree" to "strongly disagree". The first issue and concern addressed was the represented by the following statement "More should be done to protect endangered plant/animal species/habitats." The mean score of this statement was 3.820 with a standard deviation of 0.9473. The second statement was "Non-residents should be assessed a larger fee than residents to participate in specific outdoor recreation activities." The mean score of this statement was 3.586 with a standard deviation of 1.5883. The forth and final statement was "I would be willing to pay higher user fees if the increase would be dedicated to maintenance, acquisition, and development of recreation programs and properties." The mean score of this variable was 3.223 with a standard deviation of 1.1323.

Sociodemographics. Five social demographic variables were included in the analysis. Age was measured by asking "What is your age (in years)?". The respondents mean age was, 47.77 years, the median was 47, and the mode was 50, with the standard deviation of 16.77. Income was measure by asking the respondent what is your total family income before taxes? (they were provided: $__ __ __,__ __ __.00). Respondents mean total family income $68,15, with a median of $70,000, and a mode of $80,000, with a standard deviation of $37,534. Education was measured by asking the respondents to "Please circle the highest level of education that you have completed." They were provided with "HS", "AD", "BA", "BS", "MA", "MS", "Ph.D.", "JD", and "MD". These items were collapsed into five distinct categories, representing "high school=1", Associates Degree=2", "Bachelors degree=3", "Masters degree=4", and "professional or Ph.D.=5". The mean score on the education variable was 2.305, with a mode of 1, and median of 2, with a standard deviation of 1.28. The number of years living in current residence was measured by asking the respondents "How many years have you lived at your current residence?". The mean score on the years in residence variable was 13.401, with a mode of 2 and a median of 10 with a standard deviation of 12.87. The number of acres of land currently owned was measured by asking the respondent "How many acres of land do you own? (if any)." The mean score of the acres of land owned variable was 14.638, the mode was 0, the median was 1 and the standard deviation was 26.71. Gender was measured by asking respondents "What is your gender?". Reponses were 55% male and 45% female

Statistical Procedures

This study uses univariate analysis of variance statistics to consider the unique (as measure by the F-value) effect of the native/in-migration cohort and metro/non-metro residence on a variety of issues of interest to outdoor recreation resource managers while controlling for the effects of age of the respondent.

Results

This section reports the results from a univariate (two way) analysis of the sociodemographic measures (age, income, education, years living in house acreage and gender) that were

Table 3. Outdoor recreation variables and the univariate analysis of variance model controlling for age of the respondent.

	NATIVE	Before 1970	1970s	1980s & 1990s	F-Value
Recreation Central to Life	3.74	3.47	3.71	3.66	0.563
Non-metro	3.61	3.50	3.75	3.89	1.064
Metro	3.81	3.46	3.69	3.55	IT 3.16*
Escape Pressures	2.70	2.66	2.68	2.69	0.117
Non-metro	2.71	2.70	2.83	2.76	4.325**
Metro	2.70	2.64	2.63	2.66	
Hunting	2.64	1.02	1.37	1.29	5.230**
Non-metro	3.58	1.88	2.54	1.90	20.424***
Metro	2.14	0.78	0.95	1.03	
Fishing	2.77	1.89	2.10	1.74	4.025*
Non-metro	2.96	1.90	1.86	1.84	0.062
Metro	2.67	1.88	2.18	1.70	
Hunting&Fishing	5.29	2.76	3.44	2.81	6.726**
Non-metro	6.37	3.84	4.34	3.42	9.116***
Metro	4.72	2.46	3.11	2.54	
Power Equipment	3.21	1.62	2.63	1.97	5.718***
Non-metro	3.32	1.35	3.13	2.28	1.594
Metro	3.15	1.68	2.46	1.85	
Requires Development	5.98	4.15	6.60	5.65	3.465**
Non-metro	5.25	2.59	6.51	4.50	
Metro	6.35	4.52	6.63	6.20	
Active	9.63	8.51	10.79	9.91	2.743*
Non-metro	9.16	7.90	10.82	9.72	0.024
Metro	9.87	8.64	10.79	9.98	
Environmental Protection	3.95	3.95	4.04	4.00	2.095
Non-metro	3.85	4.11	4.06	4.19	3.665**
Metro	4.01	3.91	4.03	3.92	IT 4.125**
Wetland Protection	2.09	2.20	2.24	2.33	7.000***
Non-metro	1.94	2.31	2.35	2.35	1.167
Metro	2.16	2.17	2.21	2.21	IT 2.820*
Carrying Capacity	1.66	1.75	1.67	1.82	2.899*
Non-metro	1.66	1.82	1.70	1.88	0.469
Metro	1.66	1.74	1.66	1.79	
Endangered Species	3.79	3.67	3.85	3.89	2.014
Non-metro	3.70	3.94	4.00	4.11	7.835**
Metro	3.84	3.60	3.80	3.80	IT 10.28***
Non-resident Fees	3.99	3.48	3.58	3.25	5.98***
Non-metro	3.80	3.63	3.28	3.45	0.122
Metro	4.09	3.45	3.68	3.17	IT 1.95
Table 3 Continued					
Higher Fees for Recreation	3.02	3.28	3.22	3.37	3.793**
Non-metro	2.84	3.10	3.00	3.26	7.129**
Metro	3.11	3.33	3.30	3.42	

identified in the literature review as important and potentially intercorrelated with this study's two independent variables (metro/non-metro and native/in-migrants) The results show that there swere significant association between age and native/in migrant cohort variable. Persons moving to NH prior to 1970 were significantly older and lived in their house for more years than the native and other two cohorts. The results also showed that residents of non-metro counties have significantly higher incomes than their non-metro counterparts. The data also suggest that the Native cohort has significantly lower education. Previous research suggested the importance of considering the amount of land owned by the respondents in examining the effects of in-migration. Our data show that respondents from non-metro counties owned more land than their metro counterparts. Table 2 shows the f-values for each of the dependent variables and each of the independent variables (and the interaction term between the independent variables), and the control variable age

Table 3 presents the results from the univariate analysis of variable for those models that the native/in-migrant cohort and or metro/non-metro or the interaction between native/in-migrant and metro/ non-metro variables was significant. The results suggest that the interaction between native/in-migrant and metro/non-metro was significant for the measure of the centrality of outdoor recreation to the respondent's life was significant. A comparison of means shows that outdoor recreation is less central for natives from rural areas and more central to the 1980s and 1990s cohort.

Relative to the motivation measures there were not significant differences for the Native/In-migrant cohort. The only significant difference was that respondents moving to rural areas from the 1970s on were more motivated to "escape" than natives. Table 3 suggests that there were significant differences across the Native/In-migrant cohort for a number of the participation in outdoor recreation variables. For example, hunting, fishing, hunting and fishing, and power equipment all require that development and active measures were all significant. Suggesting that New Hampshire "natives" may be distinct in their selection of recreation participation packages. Each of the significant variables had unique resource or equipment requirements except for the more general measure of overall activity participation. The metro/non-metro variable best explained participation in hunting and the combined hunting and fishing variable. There were no significant interaction effects between the native/in-migrant cohort variable and the metro/non-metrovariable. The metro/non-metro variable had a unique significant effect for the measure of environmental protection. Respondents from non-metro areas were more supportive than those from metro areas. There was a significant interaction effect between the native/in-migrant cohort and metro/non-metro residence with the native residents in non-metro areas being less supportive than natives from metro areas.

The native/in-migrant cohort variable was significant for the dependent variable measuring support for wetland protection was significant. It showed that in-migrants considered wetland protection to be more of a funding priority. This chart shows that metro residents are fairly consistent across the native/in-migrant cohort measure but there is a considerable difference between the native non-metro and the in-migrant cohorts. Relative to the measure of support for carrying capacity programs the results show no significant difference for the native/in-migrant cohort, but there was a significant difference for the metro/non-metro residence variable was significant with metro residents being more supportive. Considering attitudes toward endangered species protection, native/in-migrants were not significant while the metro/non-metro variable was significant. Non-metro residents were more supportive than the metro, with the exception of non-metro natives (this interaction term was significant).

The last set of dependent variables focused on fees for outdoor recreation. With respect to higher fees for non-residents, the native/in-migrant cohort was significant. Natives were shown to be the most supportive of higher fees for non-residents. There was no significant difference across the metro/non-metro residents variable. The final variable focused on higher fees for outdoor recreation that would be earmarked for support for outdoor recreation programs and development. The native/in-migrant cohort was significant for this variable. Natives were the least supportive of higher fees. The metro/non-metro variable was significant for higher fees as well. Non-metro residents were shown to be the least supportive for higher fees. There was no significant interaction effect for this variable.

Conclusions

New Hampshire "natives" are different, particularly New Hampshire "natives" from non-metro counties in terms of their outdoor recreation behaviors and attitudes towards specific recreation management policies. The most dramatic differences were between non-metro natives and non-metro in-migrants from 1980s and 1990s. This data suggests the potential for recreation and social conflict around issues associated with specific outdoor recreation participation packages and over issues associated with wetlands and endangered species and fee increases. This data provides some support for "last settler" with respect to carrying capacity (more recent in-migrants were more supportive of setting limits). It also serves to illustrate the complex nature of the relationships between native/in-migrants and metro/non-metro residents that may be overlooked when using bivariate types of analysis, in that there are a number of significant interactions and the differences between study groups vary considerably across research questions.

Limitations and Recommendations

This research was not able to consider whether in-migrants moved from metro or non-metro locations. Future research should do more to address this issue in order to better understand the "whys?" as well as the "whats." Recreation planners and managers should be aware of differences across both native/in-migrants and metro/non-metro groups in the outdoor recreation planning process. Some outdoor recreation providers in the Northeast are considering this issue in marketing and fund raising initiatives. The data contained in this report could be used to design public information and education programs

References

Jacob, G.R. and R. Schreyer. 1980. "Conflict in Outdoor Recreation: A Theoretical Perspective." Journal of Leisure Research 12(4):368-380.

Manning, R.M. 1986. Studies in Outdoor Recreation: Search and Research for Satisfaction. Corvallis: Oregon State University Press.

Smith, M. and R. Krannich, 2000. "Culture Clash" Revisited: Newcomer and Longer-Term Residents' Attitudes Towards Land Use Development, and Environmental Issues in Rural Communities in the Rocky Mountain West." *Rural Sociology*, 65 (3): 388-421.

Sofranko, A.J. and F.C. Fliegel. 1980. "Rural Growth and Urban Newcomers." Journal of the Community Development Society, 11(2):53-68.

Voss, P.R. 1980. "A Test of the 'Gangplank Syndrome' Among Recent Migrants to the Upper Great Lakes Region." Journal of the Community Development Society, 11(1):95-111.

Wellman, J.D. and R.W. Marans. 1983. " Social Conflict Associated with Turnaround Migration: Evidence from Northern Michigan." Journal of the Community Development Society 14(1):1-15.

Williams, A.S. and P.C. Jobes. 1990. "Economic and Quality of Life Considerations in Urban-Rural Migration." Journal of Rural Studies 6:187-94.