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The importance of ancillary attributes in destination choice and length of stay: Cross-country skiers at a small northern Michigan community

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THE IMPORTANCE OF ANCILLARY ATTRIBUTES IN DESTINATION CHOICE AND LENGTH OF STAY: CROSS-COUNTRY SKIERS AT A SMALL NORTHERN MICHIGAN COMMUNITY

By

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ABSTRACT

THE IMPORTANCE OF ANCILLARY ATTRIBUTES IN DESTINATION CHOICE AND LENGTH OF STAY: CROSS-COUNTRY SKIERS AT A SMALL NORTHERN MICHIGAN COMMUNITY

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Ancillary attributes are of secondary importance in achieving the main objective of an activity. They facilitate the activity, but are not directly related to the principle activity of an outdoor recreation trip. Those ancillary attributes related to basic needs and present in the community were expected to be rated higher in importance in choosing a destination than those ancillary attributes not related to basic needs and not present in the community. In addition, variations in length of stay and in willingness to pay higher trail fees were expected to be associated with importance ratings of some ancillary attributes. The importance of ancillary attributes may be undervalued in winter recreation activities such as cross-country skiing.

Cross-country skiers responded to a questionnaire distributed at cross-country ski trails during the winter of 1991-92 near Munising, Michigan. The questionnaire contained a list of 21 ancillary attributes and 1 cross-country ski trail attribute. Importance ratings of individual attributes were compared to the average rating of all attributes with paired t-tests. Regression models were then developed to examine variations in length of stay and willingness to pay trail fees. These models were then forced into stepwise regression analyses with the importance ratings of the 21 ancillary attributes.

Attributes receiving higher importance ratings where those directly related to the main activity of the trip (cross-country skiing) or to sustenance. The importance ratings of some ancillary attributes were significantly associated with variations in length of stay or willingness to pay trail fees. Often, the cross-country ski trail is provided by a government agency while the ancillary attributes are provided by local businesses. Both types of organizations may benefit as more customers are drawn by the combination of goods and services provided by both sectors than would have been attracted to the destination by the efforts of only one sector. Particular ancillary attributes may encourage longer stays, higher spending, and the selection of a community as a cross-country ski destination.

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CHAPTER I: INTRODUCTION

Cross-country skiers in Michigan and the northwestern Great Lakes Region in general have many high quality destinations to choose from with superb ski trails. From this relatively large choice set of potential destinations, cross-country skiers usually seriously consider only two to six possibilities (Woodside and Sherrell 1977; Woodside and Carr 1988).

In marketing these high quality destination places, each destination community can be considered to be a whole product in and of itself. In addition, each destination community can be subdivided into separate individual service and attraction products which together make up the destination product. The customer in choosing a destination makes choices among alternative destinations, at least in part, based upon the separate individual service and attraction products contained in the destination communities being considered. These individual service and attraction products can be termed attributes. The exact combination of attributes or separate attractions and services within the destination chosen by the tourist creates a unique travel experience or package (Ashworth and Voogd 1990; Doswell and Gamble 1981), or more specifically in this study a unique cross-country ski experience.

This is not to say that the same destination is chosen every time under similar circumstances. People are likely to have several regular destinations (Fesenmaier 1985). The goal of marketing a destination should be to become a member of the group of destinations that receive regular consideration by a large number of cross-country skiers. To accomplish this, the destination should have a basic package of attributes which are important to various cross-country skier market segments. This study examines which individual products within a larger destination product were of importance to cross-country skiers visiting Munising, Michigan during the winter of 1991-1992. The study further examines the importance of these individual products in understanding variations in length-of-stay and willingness to pay trail fees (Bell and Leeworthy 1990; Silberman 1985; Usyal, McDonald, and O'leary 1988; Walsh and Davitt 1983).

Munising is a small community located on the southern shore of Lake Superior in Alger County, Michigan (Figure 1). Cross-country ski trails are provided by the U.S. Forest Service and the National Park Service. These agencies belong to different departments of the federal government and have substantially different management philosophies. The differences in administrative philosophy may result in the provision of different cross-country ski experiences by the two agencies. These differing experiences may attract skiers who prefer differing combinations of attributes.

Much recreation research has focused on the importance of setting to the recreational experience or outcome and to the motivations for participating in outdoor recreation activities (i.e. McCool, Stankey, and Clark 1985; Driver and others 1987; Virden and Knopf 1989). Recreationists prefer to visit those areas which have attributes or characteristics which they consider

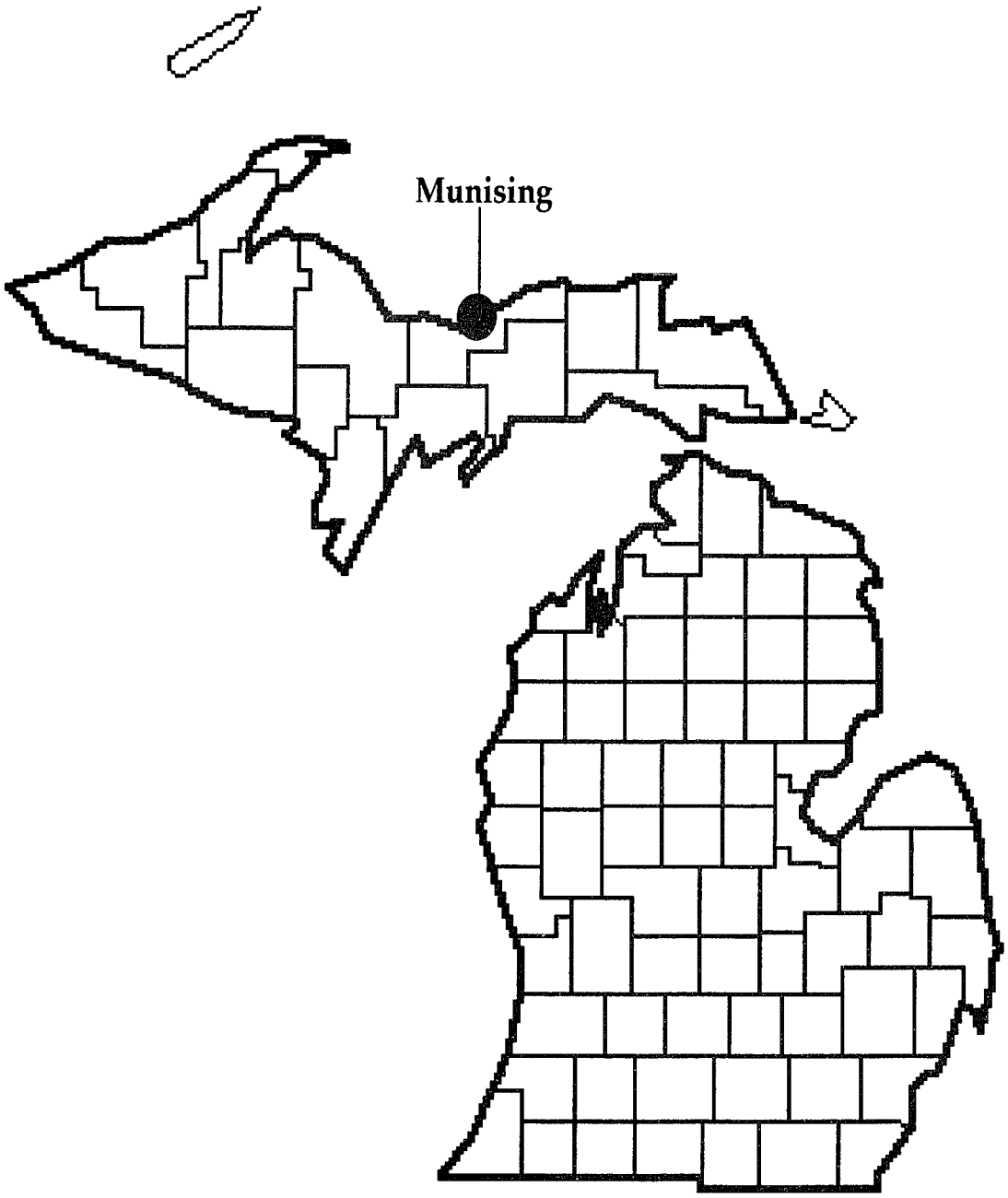

Figure 1. Location of Munising, Michigan.

to be important in achieving desired experiences or benefits. Usually, the recreator considers more than one attribute when selecting an area to visit. The relative attractiveness of an area can be measured by adding the amount of each attribute for each area weighted by the importance of that attribute and comparing the sums for each area under consideration. This approach has been given several titles in the literature including multi-attribute theory, rational choice theory, and expected utility theory (Hogarth 1987). Several related theories, expectancy theory, the theory of reasoned behavior, and the theory of planned action (Ajzen and Driver 1991) are somewhat different in that they examine attitudes and intentions and their relation to behavior. Essentially the same approach of combining attitudes is used to arrive at behavioral intentions. People undertake actions or select destinations based on the relative attractiveness of the behavior across a variety of motivations or needs weighted by the likelihood of occurrence, or performance.

While some studies have examined attribute importance in the context of general tourism (Goodrich 1978; Bronner and de Hoog 1985; Crompton, Fakeye, and Lue 1992; Bonn, Furr, and Uysal 1992; Kretchman and Eagles 1990; Um and Crompton 1991), no studies of specific outdoor recreation activities have included importance ratings of support services as independent variables in examining length of stay or number of trips. Tourism studies usually use attribute importance ratings either by themselves or in conjunction with measures of perceptions of destinations to compare potential destinations or to segment respondents into potential market segments.

Current cross-country skier research using the multi-attribute approach focuses primarily on the trail setting and is related to the recreation

opportunity spectrum concept (Clark and Stankey 1979). Few studies have examined non-trail attributes which may be important in attracting cross-country skiers to particular destinations. No studies have linked non-trail attributes to length of stay other than to use aggregate spending on such attributes as a constraint. Because skiers cannot spend 24 hours a day skiing, it is logical to suppose that destination attributes other than those directly associated with the cross-country ski trail may be important in attracting skiers. These other attributes may aid the cross-country skier in fulfilling motivations and attaining beneficial outcomes. The combination of non-trail attributes and trail attributes may act synergistically (Poon 1989) and result in higher value to cross-country skiers than trail attribute and non-trail attributes considered separately. A product composed of a combination of several goods may possess characteristics different from those of the goods if considered individually (Lancaster 1966).

In rural areas of roughly even natural resource distribution, natural resource characteristics may have little effect on tourism spending (Roehl, Fesenmaier, and Fesenmaier 1993). Pearce (1982) speculates that natural environments may be particularly valuable for self-actualizing experiences while man-made environments fulfill physiological needs. In addition, these ancillary attributes may be easier for destination managers (either local business persons or government agency managers) to control than trail conditions. Trail conditions may largely depend on weather during a particular year, government agency funding, or the efforts of local advocates of cross-country skiing.

Moreover, because of the large number of excellent ski trails in northern Michigan, one could suppose that decisions about which trail or

local area to select for a weekend of skiing may be largely based on the presence of key ancillary attributes. Previous studies have focused on such trail attributes as difficulty and the opportunity to observe wildlife and picturesque scenery. The contribution of these trail attributes towards experience outcomes or benefits has been frequently examined. More recently, a few studies have looked at the attributes of the cross-country ski resort (Brayley 1991). However, no studies have examined which small town attributes are important to the cross-country skier in choosing a destination. And, no studies have tried to place such ancillary attributes in context with other variables such as distance from home, perceived constraints, satisfaction, experience, skill level, and trail quality which have been discussed as influencing destination choice and length of stay in the recreation literature.

Ancillary Attributes

All products are made up of varying inputs of services and physical goods. There are no products which are entirely physical in nature nor are there any products which are entirely service in nature. Key physical attributes of a service product can be thought of as facilitating products (Sasser, Olsen, and Wyckoff 1978). A collection of related product attributes can be thought of as a service package for products which are primarily service in nature, as most tourism end products are (Normann 1991). Cross-country skiing in the case of small rural communities consists of a physical product, the ski trail, and a bundle of services, trail grooming, lodging, restaurant meals, and entertainment.

Product attributes can generally be divided into two groups, core and ancillary or peripheral (Normann 1991). A core attribute is one that clearly is the main focus of activity or interest, a cross-country ski trail for example. Ancillary or peripheral attributes are part of the package but are of lesser importance, the external appearance of a hotel for example. When there is little differentiation among core services or product attributes offered by a number of different providers, then competition for customers may shift to ancillary attributes or services (Normann 1991). Since there are many cross-country ski trails in northern Michigan of roughly the same quality, competition for cross-country skiers may be taking place on the presence or absence of key ancillary attributes.

Purpose of Study

The purpose of this study is to examine which ancillary attributes are of greater importance to cross-country skiers in choosing a destination and to examine ancillary attribute importance in explaining variations in length of stay in combination with distance from home, perceived constraints, satisfaction, past overnight ski trips, skill level, and trail quality.

Importance of Study

Instead of asking ". . . at what level tourism development detracts from the wilderness experience" (Fridgen 1984, p. 23), this study examines which types of development contribute to the rural, small-town, cross-country ski experience. No other studies have examined the importance of the attributes to be found in small rural communities to cross-country skiers. Several other

studies have examined trail attributes, motel or resort attributes, and motivations and experience outcomes.

The ancillary attributes of a destination often result in additional visitor activities which take place during the same trip as the main activity. For some members of the cross-country ski group, these additional activities, socializing at a tavern for example, may become the main activity. Activities and the attributes they are based in a trip to a specific destination are termed activity packages (McCool 1978). The activities considered as part of a package in any one publication are often those which take place in a wild land setting, or those which take place in a built environment, but rarely are the activities of the two settings combined. The activity package concept can incorporate a combination of attributes which make up the entire trip experience, including those attributes of direct importance to performing the main trip activity and those which facilitate the main activity by providing comfort, entertainment, and sustenance while the recreator is disengaged from the main activity (Gunn 1994).

Witt and Wright (1992) recommend examining valence and instrumentality of the attributes to tourists across destinations along with expectations of actually visiting the destination. While the specific situation of the present study makes such an arrangement unworkable, study results represent a valuable first step in that direction for northern rural communities.

Results from this study are of interest to the cross-country ski industry and especially to small communities in Michigan's Upper Peninsula attempting to increase their cross-country skier market share. Knowing which attributes are of importance to cross-country skiers will allow more effective

marketing campaigns aimed at changing beliefs about these attributes, changing the relative importance of attributes, adding new important attributes at destinations currently lacking them, and changing beliefs about the "ideal" cross-country ski destination (Hawkins, Best, and Coney 1992).

This study could be used as a part of a much larger study to measure tourism potential and suitability on either a regional or statewide basis. Often such studies select variables or weight them based on literature reviews or expert opinions (Pearce 1982). Variables and weights should be selected based upon empirical evidence of what tourists consider to be of importance. The availability of attributes important to cross-country skiing and other activities could be measured, mapped, and summed for each activity. Such an endeavor could be useful in guiding investment in tourism infrastructure or avoiding unnecessary or damaging development. Blank and Gunn (1965) developed such a plan for Michigan's Upper Peninsula in the early 1960s. In the intervening 30 years, much change has taken place in the region and in the activities which recreationists pursue. Advocates of this approach to tourism development have focussed primarily on warm weather activities, making a study of winter tourism potential especially valuable.

CHAPTER II: LITERATURE REVIEW

Several areas of research contribute to the foundation of this study. Multi-attribute theory has been the basis of much research in recreation and tourism. Attributes have been used to analyze attitudes, motivation, decision-making or choice, preferences, and satisfaction. The attributes used most often in recreation research are those which directly influence on-site recreation experiences (such as trail, park, or campground attributes), while tourism research often focuses on attributes of destination cities, regions, and service centers. Few tourism studies, other than those which consider hiking or camping, examine the roles of attributes in specific outdoor recreation activities or highly specialized activities such as cross-country skiing.

Few studies combine ancillary attributes (those attributes not directly related to the primary purpose of the trip) with other variables which have been shown to be associated with length of stay. Those that have linked attributes to other variables either use general items such as "hotel quality" or rather narrow items such as "hotel appearance." Ancillary attributes are sometimes considered in economic studies as a portion of such variables as on-site price.

Attribute importance or preference has been examined on an attribute by attribute basis. Attribute ratings have been combined into underlying dimensions and frequently these dimensions have been rotated into orthogonal variables through factor analysis. The resulting factors, or sometimes even the individual attributes, have then been used to segment the

market either through cluster or discriminant analysis (i. e. Crask 1981; Shih 1986, Taylor 1986; Teye 1989; Davis and Sternquist 1987; Ritchie and Zins 1978; Crompton, Fakeye, and Chi-Chuan Lue 1992; Rao, Thomas, and Javalgi 1992). Attributes have also been combined and manipulated in factorial designs in experimental choice research (Louviere and Timmermans 1992). Typically in such research, each attribute is divided into several levels. The different levels of the attributes under study are then combined into descriptions of several possible destinations from which the experimental subjects choose. The most important attributes and attribute levels are then revealed through statistical analysis of the number of times each hypothetical destination description was chosen. Attributes have also been evaluated through examination of numbers of actual visitors and variations in travel cost in the economic literature (Mendelshohn 1987; Caulkins, Bishop, and Bouwes 1986, Morey 1981).

Theoretical Framework

As Levy (1979) has discussed, variations in leisure behavior are a result of the interaction of differences among persons and environments. This study focuses primarily on the variations in attributes which comprise the unique environment of a small northern Michigan community and the differences in the importance of these attributes to people. In combination, these attributes form a complete and somewhat unique cross-country ski destination. Cross-country skiers who desire those attributes present in the Munising environment would more likely be found in Munising than those who desire an environment offering other amenities.

The theoretical background for this study is based on economic utility theory or the rational economic model. Utility theory states that a rational individual will choose the option which has the most value for that particular consumer (Hogarth 1987). However, the individual is unlikely to be able to know about or compare all possible products of interest on all dimensions of interest and select the alternative that maximizes expected utility or value. To reduce the complexity of the decision task, people are likely to look for certain levels or degrees of quality on several key attributes. When an alternative is encountered which meets or exceeds each of the specified levels of the key attributes, it is chosen. As the search continues, the decision-maker may change the looked for levels of attribute qualities to reflect what is encountered in the market.

Often, a choice must be made among several alternatives. Decision makers usually employ one or a combination of several different strategies or models in choosing among alternatives (Hogarth 1987). Whatever the strategy used, it can be considered a form of the basic linear compensatory model. Each salient dimension of an alternative is measured; the measure is weighted to reflect the importance of the dimension in making the decision; the alternative having the greatest combined value of all weighted dimension measures is chosen. Variations of this model exist. The additive difference model evaluates the differences between two alternatives on a dimension by dimension basis. The differences are then totaled and compared. With the ideal point model, each alternative is compared with what the decision maker would consider the perfect alternative which may or may not exist.

There are several non-compensatory models (Hogarth 1987), but they can be considered special cases of the compensatory model with extreme

weights applied to some dimensions (or portions of their measurements), a time order comparison factor, or an importance order comparison factor used to determine the order of attribute comparisons.

The conjunctive model sets cutoff points on the dimensions, and any alternative with a dimension not exceeding the cutoff point is dropped from consideration. The disjunctive model allows for a low score on one dimension provided some other dimension receives a very high score. The lexicographic model compares alternatives on a dimension by dimension basis starting with the most important dimension, continuing dimension by dimension in order of importance until a difference is found among the alternatives. The elimination-by-aspects model eliminates alternatives based upon the which alternative lacks a dimension. The dimension used for comparison is chosen probabilisticly on a dimension by dimension basis from a pool of dimensions of interest.

In the above strategies, the key decision points are the choosing of the dimensions, or in the terminology of this study the attributes, to be used in evaluating the alternatives and the weighting of those alternatives. The attributes chosen and their assigned weights largely determine which alternative is ultimately chosen.

If the outcomes of choosing among alternatives are uncertain, as they usually are in choosing a travel destination, then expected utility or expectancy theory (Hogarth 1987, Witt and Wright 1992) can be used to evaluate the uncertainty involved in the choice along with the quality and importance of the combination of key attributes. Expectancy introduces a probability that a specific outcome will occur.

Each product can be thought of as a bundle of attributes from which utility is derived (Lancaster 1966), just as the ownership of property can be conceptualized as the ownership of a bundle of rights (Barlowe 1986). Whether or not the product is property with a bundle of rights or a vacation destination with a bundle of related service and attraction attributes, the consumer bases his or her purchase decision upon the benefits contained within the bundle. Competing destinations can be thought of as competing products or competing bundles of attributes. Only when a consumer has made a purchase decision to visit a particular destination, can attributes which fill a similar function, or niche, within the destination be thought of as competing products (Goodall 1991). Until the customer has made a destination selection, all the attributes of a particular destination are in effect on the same team and part of the same product. As in sports, some members of the team (shops, restaurants, hotels, etc.) may be more valuable in scoring, attracting customers, or, more specifically, attracting cross-country skiers than others. Attributes may be experiences, activities, facilities, or environmental factors. The destination which the tourist believes to have a higher degree of the attributes that the tourist considers important is the destination most likely to be chosen, given the tourist has roughly equal capabilities and risks in visiting each destination.

According to some authors (i.e. Dann 1977), the decision to travel is based mostly upon so-called push factors (need for a break from work, relaxation, social interaction, ego enhancement). However, in this study, the decision to travel and the decision to participate in a specific activity (cross-country skiing) had already been made by the subjects so that an examination of push factors (Dann 1977) is beyond the scope of this study. Hodgson (1983)

indicates that many of the push factors, the decision to go, how long, budget, traveling companions, and type and purpose of trip maybe beyond the influence of strategic marketing programs. And, since the destination had already been chosen by the respondents, measurement of the beliefs of the respondents that destinations have varying amounts of pull factors would have been difficult to measure without a large amount of bias caused by closeness of the decision and the actual visit to Munising, Michigan.

This study focuses on the types of pull factors which lead to the selection of the destination out of a wide range of possible destinations after the push factors have resulted in a basic level of motivation to travel (Manfredo 1989). Those ancillary attributes deemed more important could have a greater role to play in assuring the cross-country skier the behavioral outcome sought on the cross-country ski trip. Recreation Opportunity Spectrum literature (i.e. Driver and others 1987, Virden and Knopf 1989,) indicates that these pull attributes may differ for people seeking different experiences. Kaltenborn and Emmelin (1993) found that five groups of visitors to Svalbard, a relatively undeveloped group of islands in the Norwegian arctic, had similar desirability ratings for setting attributes such as remoteness and naturalness, but differed on such management attributes as transportation, hut access, and information. The groups also differed on their travel patterns. Experiences offered by National Park Service and U.S. Forest Service trails in Munising may be different leading to skiers frequenting each agency and who desire different ancillary attributes.

When both groups are considered together, some attributes could be expected to be more important than others. Pearce (1982) states that natural environments may be of particular value in providing self-actualizing

experiences while the service centers or cities provide for physiological needs. Physiological needs such as hunger and thirst are of primary concern to the tourist and are accompanied by needs for identity, status, and security (Teare 1990). Attributes which either provide satiation of physiological needs or directly contribute to self-actualizing experiences could be expected to be rated as being more important by tourists than other attributes which do not have a strong need link, but perhaps serve as fillers between strong need link activities. Mayo and Jarvis (1981) note that change from everyday routine during travel may lessen the motivation to satiate lower-order needs. Those needs moved into the background would most likely be mid-range needs capable of being fulfilled at home and not critical to short term well-being, leaving physiological needs, which need satiation on a short-cycle periodical basis, and higher order needs at a higher state of awareness, resulting in stronger motivations for fulfillment (Atkinson and Raynor 1974). Positive or satisfactory experiences result from the fulfillment of physiological, love and belongingness, and self-actualizing needs. Negative or unsatisfactory experiences result from a failure to attain lower order needs such as physiological and safety needs (Pearce and Caltabiano 1983).

Satisfaction

Satisfaction is related to ancillary attribute importance. A community with a number of important attributes could interest customers in visiting. Satisfaction with those attributes could then influence length of stay or the number of return visits. Including both importance and satisfaction measures in a consumer behavior model are important because importance indicates expected ancillary attributes and satisfaction indicates how well the

community fulfilled those expectations. Lawler (1973) in his discussion of fulfillment, discrepancy, and equity theories of satisfaction indicates that when a customer receives more of the things he feels he should receive, greater satisfaction results. According to Dorfman (1979) overall satisfaction is most dependent on the perception of the conditions deemed valuable, on the differences between perceived and preferred states, and on the differences between perceived and expected conditions. Or more simply put ". . . benefits provided by a destination must match [the] benefits sought by the market . . . " (Woodside 1982). Therefore, those skiers who rated the ancillary facilities which Munising offers as being more important could be expected to be more satisfied than those skiers who rated as more important the attributes which Munising is lacking. Those skiers who are satisfied could be expected to stay longer than cross-country skiers who are not. The physical environment can signal the intended market as to the types of services and products available (Bitner 1992) . Those skiers who did not receive the signal or misinterpreted it are apt to be dissatisfied if they are looking for different products and services.

Although the respondents for this study were merely requested to indicate how important a selection of ancillary attributes were in selecting a destination community for the activity of cross-skiing, importance in this study could be interpreted as asking the cross-country skier if he or she felt this benefit or product should be included in the destination service package for consumption during the cross-country ski vacation. The questionnaire did not specifically ask respondents to compare the services received in Munising to other similar products, but respondents perhaps compared them anyway as a matter of habit. Data collected on site tend to yield a large

number of satisfied respondents because dissatisfied respondents tend to leave or not come in the first place. People tend to convince themselves they are satisfied regardless of their experience to justify to themselves the time, money, and trouble they took to come to destinations such as Munising (Rollins 1985; Rollins and Chambers 1990; Heberlein 1977).

Dorfman (1979) determined that the most important determinant of satisfaction in camping is the presence or absence of annoying conditions. Lawler (1973) also notes that facets with which workers are dissatisfied are likely to be perceived as being more important by the workers than those job facets with which they are satisfied. People notice service which is below their expectations much more than they notice satisfactory service (Normann 1991). Dissatisfaction may be more highly correlated with importance than satisfaction (Lawler 1973). Thus people who rated gourmet restaurant as extremely important are likely to be more dissatisfied than those skiers who rated family restaurant as extremely important are satisfied because Munising comes closer to supplying family restaurants than gourmet restaurants.

Satisfaction has been conceptualized as being composed of several underlying performance dimensions (Pizam 1978, Lawler 1973) which must be identified and measured and their relative importance determined. Pizam (1978) measured 32 items developed from a review of consumer satisfaction and destination attractiveness literature, interviews with local tourism experts, and open-ended interviews with tourists. Eight factors were derived from the 32 items: beach opportunities, cost, hospitality, eating and drinking facilities, accommodation facilities, campground facilities, environment, and extent of commercialization. However, some of the items lumped together included some very different attributes (restaurants, cafeterias, and bars), and

in other cases one item represented a whole class of attributes which could contain a substantial amount of variation (hotels/motels) for example.

In a similar fashion, Noe (1987) compared instrumental and expressive measures of satisfaction in two regression analyses with two different general, overall satisfaction measures as the dependent variables. The expressive measures were goal related and the instrumental measures were items likely to facilitate the attainment of the goal. Participants and spectators at a river raft responded to 23 items. The responses were then factor-analyzed using principal components into five factors. The expressive factor, which included such items as partying, music festivities, and crowd watching, explained most of the variance in the general, overall satisfaction measures. The other four factors which included items which were more controllable by managers such as satisfaction with police, park rangers, rest rooms, food, beverages, traffic, and access were not nearly as influential on overall satisfaction. Noe (1987) interpreted this result to indicate specific instrumental items were considered a means to the overall expressive end of partying, considered to be a main function of the event. However, the overall measures of satisfaction were slanted towards the river raft race activities with both overall measures of satisfaction specifically mentioning the raft race or river raft race activities. The river race study did not distinguish between respondents who were tourist and those who were local participants. Given the questionnaire items used in the study, Noe (1987) likely expected mostly to have respondents from the local area. A sample of purely tourists would perhaps be more sensitive to instrumental attributes such as food and beverage.

Overall satisfaction is often discussed as being determined by some combination of separate satisfactions derived from different facets of the

experience (Lawler 1973). Therefore, overall community satisfaction can be used as a measure of the performance of all the community's ancillary attributes in general. Overall community satisfaction in this study would be expected to be significantly determined by the component satisfactions related to lodging, restaurants, and shopping. Trail satisfaction was also measured and could also be expected to influence overall community satisfaction but to a lesser degree than attributes to be actually found in the community. Respondents may not have considered ski trails to be a part of the community because a number of the trails are located several miles from lodging establishments and the main part of town. However, based on the results of Noe (1987), trail satisfaction, a more goal oriented satisfaction measure than overall community satisfaction, could perhaps be expected to have a stronger relationship to length of stay than overall community satisfaction.

Overall community satisfaction may be more than the sum of its parts when the experience is vacation related and satisfaction is measured in a general fashion. Some people may be determined to enjoy themselves on vacation. Enjoyment may be difficult for the vacationer if she or he is not highly satisfied. Such vacationers may report high levels of satisfaction as part of their effort to enjoy themselves. More insight may be gained in an examination of dissatisfaction during vacation experiences than satisfaction. Episodes of poor service may have a stronger effect on overall satisfaction than satisfactory service, or outstanding service. Or, as the results in the study by Noe (1987) may indicate, a goal oriented measure of satisfaction (trail quality satisfaction in the case of the present study) may have more influence than satisfaction with facilitating or ancillary attributes.

Visitor satisfaction in some situations may be highly associated with visitor density or crowding. Visitor density or a crowding variable has been included in some recreation valuation studies along with various other measurable quality attributes (Englin and Mendelsohn 1991; McConnell 1977). The value and importance of the quality attributes included in the models is usually determined by comparing the number of visits to a number of similar sites which differ on the quality variables in question. Some authors such as McConnell (1977) examine differences in perceived quality through direct interviews to determine differences in individual willingness to pay. The potential of diminishing marginal benefits and ultimately total benefits caused by dissatisfaction related to the presence of additional visitors at recreation sites has been much discussed both in the recreation literature and the economic literature (i.e. Shelby 1980; Rollins and Chambers 1990). Crowding, in the case of Munising, was thought by the U.S. Forest Service not to be a problem. However, the lack of a suitable number of patrons can also be a problem for some recreation activities or for some types of participants (McConnell 1977). This potential problem for Munising cross-country skiers was not addressed in the questionnaire from which the data for this study were derived. However, comments volunteered by many of the respondents indicate that cross-country skiers in the Munising area favor uncrowded conditions. Several respondents mentioned they were fleeing crowded conditions elsewhere when they discovered Munising as a destination at which to undertake cross-country skiing.

Regression Models

Regression models have been used at least since the 1960s to predict visitation to downhill ski areas and explain variations in visitation and length of stay, often in a travel cost framework. Echelberger and Shafer (1970) related total visitor-days at 26 ski areas in northern New England and New York to facilities, management practices, and distance to metropolitan centers during the winters of 1964-65 and 1965-66. During a year of low snowfall (1964-65), total visitor-days were found to be related to advertising program. Intermediate trails, driving time, rolled and packed trails, and number of instructors were found to be related to visitor-days during a year of plentiful snowfall (1965-66). A model taking into account both years indicated that advertising and accessibility were the most significant factors in explaining variations in visitation (Echelberger and Shafer 1970).

Miles of novice, intermediate, and expert trails, lift capacity, slope exposure, snow making capacity, days of operation, advertising budget, driving time, number of instructors, percent of groomed slopes, percent of rolled slopes, percent of advertising budget for broadcast media and magazines, and percent of advertising budget for brochures and leaflets were also included in the analysis. All variables were entered into a factor analysis, then the variable with the highest loading on each resulting factor was incorporated in a regression analysis. The regression models developed for the low snow, plentiful snow, and combined years explained 71% to 89% of the variation in visitor-days. In addition, Echelberger and Shafer (1970) wanted to include in the analysis, but did not because of measurement problems, number of local ski rentals, number of private dwellings for rent, number of liquor licenses, sleeping capacity of surrounding hotels, motels,

and tourist homes, and dining capacity of nearby restaurants. These variables are ancillary attributes and not directly related to the down hill ski slope. Echelberger and Shafer (1970) recommended collecting data over a number of years to take into account climatic and other variations. They noted the difficulty of obtaining accurate data from commercial recreation facilities.

Johnston and Elsner (1972) used data collected by Herrington (1967) to analyze downhill-skier day-visits at a large number of California resorts during the 1963-64 season. Single equation multiple regression models were used to develop models of the effects of the cost of a day lift ticket, total lift capacity, length of season, competing lift capacity within 30 minutes driving time, competition from other sites, and location characteristics on the annual number of day-visits. Three out of many models were considered "most satisfactory" (Herrington, 1967, p.46). Total lift capacity, capacity at nearby sites, and length of season were positively related and cost of a day lift ticket was negatively related to the number of day-visitors.

Johnston and Elsner (1972) speculated that the addition of population, distance, and socioeconomic characteristics, would improve the models. The authors also strongly recommend using site specific variables rather than the location shift dummy variables which they incorporated into their models. They also suggested that visitation may be strongly dependent on visitation in prior years. If these results are applicable to cross country-skiing, then it would seem that destinations with more trails and more kilometers of trails (more capacity) would have a larger number of skiers.

Elsner (1971) in a two stage effort to develop a model to predict visitation to new California downhill ski resorts included distance in a regression model as the minimum driving time from the center of each

county to each ski resort in the study. Gross county skier outflow was regressed with an urbanization variable and the product of population and availability, to predict the number of skiers from each county. Availability was calculated by dividing uphill capacity by distance and summing for all resorts.

In the second stage of the model, ski use allocation was calculated as the percentage of skiers from one county which went to a particular resort. Distance for this part of the model was the minimum travel time in minutes from the most populous city in a county to each resort. There was no explanation as to why this different definition of distance was used. Predicted allocation was based on uphill capacity, open slope and distance. Other site characteristics considered were vertical rise, length, number of lifts, rental equipment, night skiing, instructors, price, jump, sledding, skating, swimming, dancing, gambling, bar, meals, snacks, rooms, cabin, dorms. It was not clear why these variables were dropped. Predicted outflows were then combined with predicted allocations to predict attendance at each resort in the study. The model is somewhat circular in that distance and lift capacity play large roles in both the allocation and outflow sides of the model. It seems that, once the population of each county and the percentage of skiers in each county are known, each ski resort could predict its share of skiers based on distance without the first stage of the model.

Mak and Moncur (1980) tested (using a tobit model) Rugg's (1973) theory, which was based on the work of Lancaster (1966), that destination choice and length of stay depend on the attributes of individual destinations. According to Rugg (1973), utility is derived from dwelling at the destination for a period of time which allows the consumption of destination attributes.

However time on-site also has an opportunity cost in that it could be used in some other leisure activity or in work. These two aspects of time, as product generating utility (time used in enjoying recreation experience) and as an input (raw material to be combined with other inputs to create the product) continue to create a problem in recreation demand estimation (McConnell 1992; Bockstael, Strand, and Hanemann 1992).

The Tobit model developed by Mak and Moncur (1980) was tested using data gathered from U.S. mainland visitors to Hawaii in 1974. However, only the amount of rain and the concentration of rooms were used as individual destination attributes. Rain was found to reduce visits and room concentration was found to attract visits. Room price had a negative effect on both destination choice and length of stay. Age was the only personal variable with an effect on travel choice, but only for first time visitors. Other personal variables included in the study were education, marital status, and party size. In addition to the individual destination attributes of room concentration and rain, money and time constraints also impacted length of stay and destination choice, with time being more important once travelers had chosen Hawaii as a destination.

Silberman (1985) examined the effects of 12 variables on length of-stay at Virginia Beach using an approach he attributes to Walsh and Davitt (1983). Silberman (1985) developed a model using stepwise regression and then with the same data estimated demand curves. He first calculated a demand curve for average total variable cost per day and length of stay holding the remaining variables constant at their mean levels. He then demonstrated the effects of shifting the demand curve by varying each of the remaining variables individually while holding the other variables constant.

Direct cost per day, distance traveled, annual household income, effect of the recession, more than one trip, staying at a campground, advance planning, planning to visit again, participating in sports, advertising, classy image, and rundown image were significantly related to length of stay. However, length of stay, in the case of Virginia Beach, was not sensitive to changes in cost per day, income, proportion of visitors affected by the recession, making more than one trip, number of months of advance planning, proportion of visitors planning to visit again, proportion of visitors participating in sports, classy resort image, and rundown image. Length of stay was more sensitive to distance traveled, increases in the proportion of visitors staying in campgrounds, and proportions of visitors learning about Virginia Beach through advertising.

In formulating the demand curve, Silberman took the somewhat unusual step of using total cost per day as the price rather than distance traveled or travel cost while holding constant the effects of all other independent variables. This would tend to confuse the effects of travel cost which may in fact increase length of stay while costs on site may work to decrease length of stay. Those traveling farther would tend to stay longer to recoup their investments and those staying in low cost accommodations such as campgrounds could perhaps afford to stay longer. Silberman also took a somewhat unique approach in allowing respondent ratings of various aspects of the image of Virginia beach into the stepwise regression analysis. Usually, site characteristics in regression demand studies are merely combined in an on-site price or cost variable, if prices exist, or measured in a strictly objective manner based on physical properties, dissolved oxygen for example in water quality studies (Bockstael, Hanemann, and Kling 1987; Parsons and

Needelman 1992; Parsons and Kealy 1992). In hedonic travel cost models, variations in travel distance to a variety of recreation sites are used to value site characteristics which usually have been measured in an objective fashion, square meters of exposed rock for example (Brown and Mendelsohn 1984; Englin and Mendelsohn 1991; Mendelsohn 1987). Importance and preference ratings have been used in a number of other ways including preferences for various landscapes and recreation facilities (Lime 1971; Lucas 1980; Allton and Lieber 1983; Peterson, Dwyer, and Darragh 1983; Lucas 1985; Watson, Williams, Roggenbuck, and Daigle 1992; Love and Watson 1992). However, these ratings usually were not then inserted into regression equations to arrive at demand or consumers surplus measures.

Uysal, McDonald, and O'Leary (1988) developed a demand model for cross-country skiing using length-of-stay as a measure of quantity for the dependent variable . Data were drawn from the 1982-83 Nationwide Recreation Survey. Length of stay was hypothesized to be a function of cost, distance traveled, skiing trips in the past year, number of persons in party, number of persons encountered at the site, man-made structures, prominence of non-recreational activities. Distance, number of trips, cost, and man-made structures were found to have the greatest effect on length of stay. The coefficients for these variables had negative signs indicating that as these variables increased, length of stay decreased. Number of persons in party (positive correlation) and number of trips (negative correlation) had the highest correlations with length of stay.

Distance is often correlated positively with length of stay in that people who travel farther must stay longer to recoup their investment. Number of trips could also be hypothesized to correlate positively with length of stay in

that those people with greater numbers of trips would be more involved with the sport of cross-country skiing and would thus not only travel more frequently to cross-country ski but would also stay longer while on those more frequent trips. An explanation offered by Uysal, McDonald, and O'Leary (1988) was that cross-country skiing is an activity which frequently takes place close to home during an allotment of only a portion of the day. Time not spent traveling is spent on the site skiing. The type of trip, whether overnight or a local trip, may be an important additional variable in examining length of stay of cross-country skiers. Furthermore, Wanhill (1990) states that "stay tourists" should be kept separate from "day" tourists in analyses because only those tourists who stay overnight consume the entire product.

Morey (1981) developed a constrained utility model to examine the variations in the number of days Colorado skiers spent at a number of Colorado ski resorts on day trips. Costs, skier ability, and site characteristics were important in determining a resort's share of the market. The model developed was found to predict skier choice better than a logit model. Results were consistent with the theory of constrained utility maximizing behavior. Effects of changing prices and characteristics on market share were estimated. It was assumed that budget allocation was independent of income, prices, and nonskiing activities, and, that marginal utility of skiing at a site decreases with increasing trips to that site. Site characteristics included were acres of ski terrain, acres designed for the skier's ability, vertical transport capacity, average annual snowfall, and an index of other physical attributes, assumed to be zero. Because participants in the study were mostly single,

day-trip skiers, characteristics such as child-care facilities, lodges, and nightlife were assumed to be unimportant.

Walsh and Davitt (1983) provide a good rational for using length of stay in demand functions and demand curves. The skier faces two decisions: how many trips to make and how many days to spend on each trip. At resorts located a great distance from the home residences of their customers, the average number of trips demanded is usually relatively low, usually around one. The number of trips, because of travel time and cost, is greatly constrained. The number of days to stay at the resort given that a trip will be made is the principle decision. Variables significantly associated with length of stay at Aspen, Colorado during the winter of 1977-78 were cost, household income, distance, substitution, party size, skiing ability, state population, and whether or not the skiers were on a package plan. Other variables were examined, some of which may have been significant if they had been entered into the stepwise regression in a different order.

Bell and Leeworthy (1990) in a study of demand for Florida beach days recommended in response to problems noted about the travel cost method of estimating recreation values (Smith and Kopp 1980) that tourists and residents be treated differently as they face different decision situations caused primarily by distance. The travel cost method assumes that recreation trips are single purpose, result in the same amount of on-site time, and that the same mode of travel was used by all travelers (Smith and Kopp 1980). The travel cost method ". . . treats tourists and residents . . .[as] utility clones" (Bell and Leeworthy 1990). Bell and Leeworthy (1990) argue that consumption of recreation services should be measured as number of trips times average trip length for those trips. As noted by Walsh and Davitt (1983) the decision faced

by distant tourists is not how many trips to make but how long to stay as time and travel cost constraints limit the number of trips severely. Bell and Leeworthy (1990) discussed modifying this approach somewhat by multiplying average trip length with number of trips. In their analysis however, they used the number of days on the beach (the prime attraction in their study) multiplied by the number of trips. This approach theoretically would better model the trade off between the number of trips and trip length for visitors traveling a wider range of distances.

Length of stay at the destination would be a better variable to use than trip length as the measure of the amount of recreation demanded in such an analysis. If trip length is considered to be the duration rather than the distance of the trip, then a portion of the trip length may be considered a cost rather than a benefit. Travel to the destination, depending on the individual consumer and several environmental factors, could be either cost or benefit. The travel cost models for analyzing demand frequently include such variables as travel cost and travel time as part of the price paid to enjoy an amount of recreation usually measured by the number of trips to a destination. By using trip length as the measure of benefit and also using travel cost and travel time, which are often highly correlated with trip length, as price variables, very similar variables are used as both the price of recreation and amount of recreation demanded. Only a portion of the trip length should be used to represent the amount of recreation received. The most likely portion of trip length to be viewed as a benefit by the consumer is the portion of the trip actually spent at the destination, the portion of the trip from which the consumer is most likely to derive pleasure. Other portions of trip length (duration), notably the portions devoted to travel to the

destination and travel back home from the destination are more likely to be viewed as costs and part of the price paid to experience leisure at the destination. Even a small percentage of the time spent at the destination may be viewed as a cost, especially if some time must be spent on family obligations with disliked people or on a disliked activity. Certainly, the time on-site has an opportunity cost (McConnel 1992).

The models proposed by Bell and Leeworthy (1990), and Walsh and Davitt (1983) anticipate the thinking of many small communities at large distances from what could logically be considered their primary markets. One of the original U.S. Forest Service objectives in sponsoring the study from which the data for this analysis were obtained was to explore how to get cross-country skiers to stay longer in the community (Chase 1991). This objective assumes that most cross-country skiers will make a small number of trips to Munising during the cross country ski season. The objectives of the U.S. Forest Service were clearly not on the valuation of the cross-country ski experience offered on their own and nearby trails and not on the value of the resource as is the focus of many travel-cost studies (Hof and King 1992), but on stimulating demand. The U.S. Forest Service believed that demand during the winter of 1990-91 was relatively low. The interest was on increasing cross-country skier days, and not on the prediction of an exact number of cross-country skier days.

Hof and King (1992) have commented that the Bell and Leeworthy (1990) model is really not a travel cost model but a new method of valuation based on on-site costs. This is actually somewhat incorrect. Distance, which as in the case of Munising, would be highly correlated with travel cost, is still an important factor, perhaps even more important than on-site costs. It is the

interplay between on-site costs and travel costs (or distance) which determines the ratio of the number of trips and length of stay (Shaw 1991). Higher travel cost (or distance) works to increase length of stay while on-site cost should work to decrease length of stay.

Shaw (1991) criticizes Bell and Leeworthy (1990) for not including more destination characteristics in their model and handling the effects of crowding in an overly simplistic fashion. In the current study, crowding, based on the reports of U.S. Forest Service personnel, was not thought to be a significant problem. Several respondents wrote comments on their questionnaire that one reason they came to Munising was to escape the crowds at some of their former destination communities in Wisconsin. As Shelby (1980) points out, crowding is not always significantly related to satisfaction. However, it is through its effects on satisfaction that crowding is thought to effect demand.

Shaw (1991) was also critical of Bell and Lee Worthy (1990) for not including additional personal characteristics in the model. The lack of individual characteristics in the Bell and Leeworthy (1990) model assumed that all visitors were homogeneous, which usually is not the case. In the model proposed in the current study, skill and previous overnight trips are used as personal variables. Cross-country skiers, especially tourist skiers at a small market destination village such as Munising, are likely to have relatively homogenous socio-economic characteristics since small destination communities are unlikely to have the diversity of tourist services which would attract a wide variety of cross-country skiers. The distances and economics of skiing at such communities are likely to act as filters, reducing the variability in socio-economic characteristics of the cross-country skiers who visit.

Destination characteristics usually included in travel cost models are very activity specific (i.e. Morey 1981; McConnell 1977; Bockstael, Hanemann, and Kling 1987). Bell and Leeworthy (1990) accounted for destination characteristics with two variables, actual price on site per day and the number of days spent in non beach activities. Price on site per day was a composite of spending at the destination for hotel, restaurants, fees, and other expenses.

Bell and Leeworthy hypothesized that as price on site increased, length of stay would decrease. Even though their results indicated support for this hypothesis, it would not be too difficult to imagine the opposite situation occurring where price on site may be positively correlated with increased length of stay. Perhaps in that case, a portion of the value usually credited to the recreation site in travel cost studies would be better attributed to supporting services found in destination communities. Increased on-site price may indicate increased spending. Increased spending may indicate that tourists are more involved in activities supported by the local establishments in the community. More involvement may indicate increased enjoyment of the destination. The increased enjoyment caused by taking part in more activities as evidenced by increased spending may increase stay length. Higher prices may also indicate higher quality and more diverse product availability and draw a more upscale clientele. People like to have a good time and will stay longer at places where good times are being enjoyed.

However, usually the thinking is that as price on site declines, stay length should increase, and as price increases, stay length should decrease. The results of Bell and Leeworthy (1990) indicated that travel cost per trip were strongly positively related to beach days. The higher the price to get to the beach, the more days were spent at the beach. Travel cost is not a sunk

cost but a variable cost which provides a choice between number of trips and beach days per trip.

The model Bell and Leeworthy (1990) introduced based on their discussion of theory used beach days per year. The variable they use in their demand equation for which they discussed results was apparently beach days per trip. Its only beach days per trip that logically should be positively correlated with travel cost per trip. Beach days per year would cause some confusion because of the trade off effects between number of trips and travel cost. Visitors from a wide range of distances could have similar beach days per year by combining differing numbers of trips and beach days per trip. Destinations which have relatively few customers living at such a distance where multiple trips are viable should be most interested in increasing demand through increasing stay length. Stay length may be a better indicator of demand than number of trips for destination communities at distances where multiple trips by a single tourist during any one season are unusual or where tourists are likely to visit a variety of destination communities in successive trips, seldom repeating destinations in any one season.

Multiple short-trip customers are likely to spend less per trip, not only because of their shorter stays (requiring fewer lodging nights and restaurant meals), but also they are not as dependent on the host community for a variety of other goods and services which they can either bring from or enjoy upon their return to home. Those customers who find certain destination ancillary attributes important are likely to spend more money while at the destination and stay longer at the destination.

Although Fletcher, Adamowicz and Graham-Tomasi (1990) state that ". . . perceptions of attributes is of particular importance in recreation demand

models", and suggest that psychometric approaches be incorporated in single site recreation demand models, few demand studies actually incorporate such measures in their models. Some have recently appeared in the tourism literature. Silbermann's article (1985), discussed above, used perceptions of Virginia Beach's image based on seven image characteristics in modeling length of stay in a two-stage least squares model. Dadgostar and Isotalo (1992) examined destination image and its relationship to the number of days spent in leisure and recreation activities in near-home city destinations during the previous 12 months. The importance of overall cost of the trip was measured on a 1 to 7 scale as opposed to average dollar cost per day. This choice of measurement was defended on the basis of the substitutability of activities within a single visit and the multipurpose nature of most trips. Since the trips were often multipurpose, the sorting out of costs according to purpose of activity would be difficult, especially over a 12 month period. Substitutability of activities would be less of a concern because income was incorporated in the model as a constraint. Lower priced activities would tend to result in lower on-site costs and possibly more tourist days overall for each income level. Tourists were defined as those who spent at least 50% of the time at the city destinations engaged in leisure and recreational activities.

Ancillary attribute importance to cross-country skiers has not yet been adequately analyzed, and cross-country skier ancillary attribute importance ratings have not been adequately linked to other constructs such as satisfaction and demand concepts such as length-of-stay. As Getz (1993) recently stated in an article on tourist shopping villages:

> A working hypothesis . . . is that heritage resources are in themselves the initial attraction, but tourist-oriented shopping and other services provide the draw for repeat visits. Retail surveys are . . . needed to test tourist preferences for types of goods and services, especially the assumption that arts and crafts, 'country' goods and souvenirs are preferred.

In the case of cross-country skiing, it is the ski trail that is the initial attraction, but what are the services that provide a draw for repeat visits or make a single visit of increased duration?

Kelly and Godbey (1992) discuss the idea that for some people consumption of goods has become synonymous with leisure. That for many people, leisure has become largely viewed as an opportunity to consume experiences produced by the actions of other people (as in viewing athletic events), as opposed to consuming experiences based on self- action. If consumption based on the actions of others is an important part of the cross-country ski holiday, then ancillary attributes will be important.

It is the ancillary attributes that provide the setting for consumption based on the actions of others, not the ski trail. An individual skier does not consume the trail, but merely uses a constantly changing 10 foot section of the trail during a progressing period of time. The trail will still exist for others to use as an input in a self-created experience. The trail provides the setting for an individual activity. But food, drink, entertainment, clothing, skis, and lodging rely more heavily on others both to create the services and products consumed and to appreciate the consumption. These products come in a variety of styles and prices whose consumption provides identification to the consumer as being part of a class or segment (Veblen 1899). The trail comes in basically one size, color, and style, and is available to anyone at low or no

cost. The ancillary attributes provide the bulk of any differentiation among consumers of cross-country ski trail experiences.

The ancillary attribute importance ratings could be expected to vary among local and tourist skiers, and among Forest Service, and Park Service, respondents if the skiers prefer different types of cross-country ski experiences and these preferences are reflected in their choice of trail operated by different agencies. Tourist and local cross-country skiers have different needs for ancillary services because the local skier can provide many services for themselves at home which the tourist skier must purchase from commercial establishments. Ancillary attribute importance ratings should make a contribution in explaining the variance in the number of days spent in Munising to cross-country ski. Those ancillary attributes which can be found in Munising, fulfill basic needs, or are related to cross-country skiing should be rated more highly in importance.

CHAPTER III: METHODOLOGY

Statement of the Problem

Outdoor recreation behavior is often conceptualized as dependent upon facilities or attributes provided by government and the time, money, and interests of the participants. Increased understanding of participation may result from a more thorough examination of attributes which are not directly related to the main purpose of the trip, ancillary attributes. Ancillary attributes (often provided by commercial establishments) may be especially important to cross-country skiers because of the winter conditions and physical exertion which characterize this sport. The problem is to determine which ancillary attributes are important to cross-country skiers. This problem is examined through two methods: (1) comparing the ancillary attribute importance ratings of individual attributes with an average rating of 22 attributes and (2) determining which ancillary attribute importance ratings have a significant association with length of stay or willingness to pay trail fees in stepwise regression models. Those ancillary attributes associated with basic needs and present in the community could be expected to receive higher importance ratings than other ancillary attributes. Possible differences in the way U.S. Forest Service and National Park Service respondents and tourists and local respondents rated the importance of ancillary attributes are also examined. Such differences could indicate a need for separate regression models for those groups.

Hypotheses

H1: Mid price lodging, family restaurants, and quality of cross-country ski trails will be rated as more important in choosing a cross-country skiing destination community than an average of 22 attribute importance ratings.

H2: Differences in ancillary attribute importance ratings will occur between local and tourist cross-country skiers and between U.S. Forest Service and National Park Service respondents.

H3: Ancillary attribute importance variables will improve a base regression model with distance, constraints, trail satisfaction, overall community satisfaction, previous overnight trips, skill level, spending, and trail quality importance as independent variables and length of stay or willingness to pay trail fees as a dependent variable when analyzed in a stepwise regression procedure.

Assumptions

Cross-country skiers who visited Munising during the season of 1991-92 had some prior knowledge of the services and products available in Munising and based their decision to visit Munising in part on that knowledge. Cross-country skiers visited Munising, rather than an alternative destination, in part because of the ancillary attributes present in the community. This analysis examines which ancillary attributes are important after making the assumption that some ancillary attributes are of importance.

Respondents were able to correctly ascribe varying levels of importance to various destination community attributes and were able to record accurately these importance levels on the questionnaire.

Respondents use a linear additive compensatory model or a variation thereof in selecting cross-country ski destinations in which they consider destination community attributes in addition to cross-country ski trail attributes. This analysis does not examine decision mechanisms but assumes respondents evaluate community characteristics and select the community with the largest number of important attributes. The presence of one attribute may compensate for an attribute which the community lacks.

Variables

U.S. Forest Service respondents are those cross-country skiers who received a questionnaire at one of the five cross-country ski trails operated under the auspices of the U.S. Forest Service in the vicinity of Munising, Michigan.

National Park Service respondents are those cross-country skiers who received a questionnaire at the Munising Trail which is managed by Pictured Rocks National Lakeshore.

Mail respondents are those who inquired about cross-country skiing opportunities at the Upper Peninsula Travel and Recreation Association and appeared on a mailing list supplied to the Travel, Tourism, and Recreation Resource Center at Michigan State University. These respondents were sent a two-page questionnaire.

Local cross-country skiers are those skiers who reported that they did not spend the night away from home while on the trip during which they received the questionnaire. Some of these respondents may have traveled a considerable distance to spend the day cross-country skiing at trails in the Munising area before returning home to spend the evening. Local cross-

country skiers are important to include in the analysis because participation is often measured as number of trips. Only recently has the recreation economic literature explicitly discussed the different decisions faced by local recreation participants and those traveling a considerable distance. Tourists may focus their decision on how long to stay while local participants may focus their decision on whether or not to make an additional trip during a specific time period. These differences in planning may be reflected in the importance ratings of some attributes.

Nonlocal or tourist skiers are those cross-country skiers who reported that they spent at least one night away from home while on the trip during which they received the questionnaire. Frequently, other definitions of tourists by other authors have also included a distance from home criteria. However, for the purposes of this study, the criteria of interest was to differentiate the dependence of the tourist on community attributes as compared to a local respondent. Staying overnight away from home was thought to be a more efficient indicator of dependence on the local community than a combination of distance and staying overnight.

Ancillary attribute importance ratings were measured by asking respondents to rate, on a 1 (not important) to 7 (extremely important) scale, the importance of 22 items in choosing a destination (Figure 2). The list was developed based on literature, consultation with local Munising, Michigan offices of the U.S. Forest Service, and staff and faculty at Michigan State University. Ancillary attributes are those goods and services which facilitate the main activity of the trip but are secondary in nature and not directly connected to the trip purpose. The Ancillary attributes with which Munising is well supplied is based on the somewhat subjective personal opinion of the

How **important** are the availability of th following features to you **when choosing** a cross-country skiing destination community? Place a check mark in the blank which reflects how you feel.

Low price motel	Not Important	___	___	___	___	___	___	___ Extremely important
Mid price motel	Not Important	___	___	___	___	___	___	___ Extremely important
Ski lodge or ski resort	Not Important	___	___	___	___	___	___	___ Extremely important
Basic kitchen (sink and microwave)	Not Important	___	___	___	___	___	___	___ Extremely important
Child care	Not Important	___	___	___	___	___	___	___ Extremely important
Swimming pool	Not Important	___	___	___	___	___	___	___ Extremely important
Sauna	Not Important	___	___	___	___	___	___	___ Extremely important
Ventilated waxing room	Not Important	___	___	___	___	___	___	___ Extremely important
Laundry	Not Important	___	___	___	___	___	___	___ Extremely important
Fast food	Not Important	___	___	___	___	___	___	___ Extremely important
Family restaurant	Not Important	___	___	___	___	___	___	___ Extremely important
Gourmet restaurant	Not Important	___	___	___	___	___	___	___ Extremely important
Night club	Not Important	___	___	___	___	___	___	___ Extremely important
Family oriented entertainment	Not Important	___	___	___	___	___	___	___ Extremely important
Cultural attraction	Not Important	___	___	___	___	___	___	___ Extremely important
Bar	Not Important	___	___	___	___	___	___	___ Extremely important
Gift shops	Not Important	___	___	___	___	___	___	___ Extremely important
Clothing shops	Not Important	___	___	___	___	___	___	___ Extremely important
Ski shops	Not Important	___	___	___	___	___	___	___ Extremely important
Local art and craft shops	Not Important	___	___	___	___	___	___	___ Extremely important
Quality of cross-country ski trails	Not Important	___	___	___	___	___	___	___ Extremely important
Overall community	Not Important	___	___	___	___	___	___	___ Extremely important

A.	**B.**
What considerations come to mind when deciding on a X-C destination	List each of these considerations in order of importance
1.	1.
2.	2.
3.	3.
4.	4.

Figure 2. Closed Ended Question and Open Ended Question.

author which was formed during several visits to Munising just before and during the 1991-92 cross-country ski season. Munising is well supplied with family restaurants and medium priced lodging. These attributes were expected to receive higher importance ratings as cross-country skiers desiring other accommodations and services would be more likely to choose other destinations.

Satisfaction consisted of asking Forest Service and National Park Service Respondents how satisfied they were with lodging, restaurants, shopping, cross-country ski trails, and overall community on a 1 to 7 scale with 1 being not satisfied and 7 being extremely satisfied. Overall community satisfaction and trail satisfaction were then included in the regression analyses below. Overall community satisfaction and trail satisfaction were expected to have a significant influence on length of stay. Less satisfied respondents were expected to have shorter stays as they would be more likely to leave earlier than more satisfied respondents. In addition, very well satisfied respondents could be expected to stretch their stay to include as many days as possible before obligations at home or work force them to return to their home communities.

Length of stay was measured by asking respondents how many days they would be within 15 miles of Munising on this trip. This measure precluded the inclusion of local respondents in the regression analyses.

Distance was measured by asking Forest Service and National Park Service Respondents approximately how many miles Munising is from where they live. Often in the economic literature distance is used to calculate travel cost and/or the opportunity cost of travel time or is used as a proxy for those variables (Donnelly and others 1990; Bockstael, Hanemann, and Kling 1987;

Silberman 1985; Bockstael, Strand, and Hanemann 1992). Since travel to Munising for cross-country skiing is almost exclusively by car with only a very occasional chartered bus, variations in distance are good approximations of variations in travel time and travel costs among respondents. The conversion of distance to actual costs measured in dollars would be more critical if the purpose of this study was to measure consumer surplus associated with cross-country skiing in the Munising area.

Constraints are factors which reduce, modify, or eliminate participation in a specific recreation activity (Crawford and Godbey 1987). Constraints were measured by asking Forest Service and Park Service respondents to rate on a 1 to 7 scale whether they agreed or disagreed with each of a list 17 reasons people do not ski as often as they would like to. The list of constraints was developed in consultation with U.S. Forest Service and National Park Service personnel, literature, and staff and faculty at Michigan State University and is presented in Figure 3. The list included intrapersonal items (poor physical condition), interpersonal items (lack of companions), and structural items (too many snowmobiles) (Crawford and Godbey 1987; Raymore and others 1993). Recent literature on leisure constraints has discussed a model consisting of a hierarchy of types of constraints. Intrapersonal constraints are those that are within the potential participant and are thought to diminish interest in participating in a given activity. Interpersonal constraints arise when the potential participant has difficulty finding suitable partners with which to participate, and structural constraints consist of difficulties arising out of society or the surrounding environment which reduce participation. Participation occurs when participants are able to negotiate through all potential constraints which they face (Jackson,

There are many reasons people do not ski as often as they would like to. If you strongly agree with one of the reasons below which may reduce the number of times people cross-country ski **in the Munising area**, check the blank closest to agree. If you strongly disagree mark the blank closest to disagree. If you feel somewhere in between, mark the blank between agree and disagree which most closely reflects how you feel about the reason. If you neither agree nor disagree, mark the middle blank.

It takes too much time to travel to Munising	disagree	___	___	___	___	___	___	___agree
Concern about snow on the roads	disagree	___	___	___	___	___	___	___agree
Concern about being unable to return home on time because of snow	disagree	___	___	___	___	___	___	___agree
Fees charged at Forest Service ski areas are too expensive	disagree	___	___	___	___	___	___	___agree
Munising is too expensive	disagree	___	___	___	___	___	___	___agree
Obligations at home or work	disagree	___	___	___	___	___	___	___agree
Members of family or group would rather go elsewhere	disagree	___	___	___	___	___	___	___agree
Parking lots are not plowed	disagree	___	___	___	___	___	___	___agree
Concern about medical care	disagree	___	___	___	___	___	___	___agree
Concern about vehicle burglary	disagree	___	___	___	___	___	___	___agree
I don't feel welcome in the community	disagree	___	___	___	___	___	___	___agree
Lack of companions	disagree	___	___	___	___	___	___	___agree
Concern about becoming lost	disagree	___	___	___	___	___	___	___agree
Poor personal physical condition	disagree	___	___	___	___	___	___	___agree
Too many snowmobiles around Munising	disagree	___	___	___	___	___	___	___agree
Not enough to do in Munising	disagree	___	___	___	___	___	___	___agree
Lack of ski rental	disagree	___	___	___	___	___	___	___agree

Figure 3. Constraint Measures.

Crawford, and Godbey 1993). The constraint ratings were then totaled for each respondent for use in regression models examining the number of days respondents expected to spend in Munising during their trip. Constraints used in the economic literature usually consist of income and time (Fletcher, Adamowicz, and Graham-Tomasi 1990). However, a variety of other constraining factors have been examined in the recreation and leisure literature (Jackson, Crawford, and Godbey 1993; Jackson and Dunn 1991; Jackson 1993). Some of those constraints are included in this analysis as well as some which may be particular to the Munising situation. Income was not measured adequately to be included in the analysis as a separate variable. However, the list of constraints included some items reflecting feelings about expense and travel time required to cross-country ski at Munising (Figure 3).

Number of overnight trips was measured by asking Forest Service and Park Service respondents how many overnight trips they had made for the purpose of cross-country skiing during the previous season. Previous overnight trips was included as a possible indicator of familiarity with substitute destinations.

Skill level was measured by asking U.S. Forest Service and National Park Service respondents to indicate their skill level on a 1 (beginner) to 5 (expert) scale. This variable and number of overnight trips during the previous season, while not only serving to provide some personal differentiation among respondents as recommended by Shaw (1991), were originally included as a result of examining recreation literature concerning activity involvement and specialization (Dimanche, Havitz, and Howard 1991; Bryan 1977; Hollenhorst 1990). This literature suggests that participants of differing skill and participation levels may have different preferences and

behaviors. Those cross-country skiers who are more skilled and travel more frequently overnight to cross-country ski would be thought to be more involved in the activity. Those cross-country skiers who are more involved may have different ancillary attribute preferences which may be reflected in their importance ratings which may affect the number of days of skiing in Munising either positively or negatively. Highly involved skiers may prefer fancier accommodations than are available in the Munising area. On the other hand they are more likely to stay longer because they like skiing regardless of the ancillary attributes available. McConnell, Strand, and Bockstael (1990) discuss the long use of such "habit" variables as skill and previous experience in recreation economic demand studies and the ability of such variables to increase the explanatory power of recreational demand models. Past behavior can be very helpful in explaining current behavior. Both skill level, which usually increases over time, and previous overnight trips provide an index of past behavior. Preferences are formed and shaped, and information is gathered and stored during previous trips.

Spending in Munising was measured by asking the Forest Service and Park Service respondents how much they and their party spent on grocery food and beverages, restaurant food and beverages, vehicle related items, lodging, ski equipment, clothing, and all other items on the day they received the questionnaire. The amounts for each item listed above were totaled to use in regression equations. Similar measures termed on site price, or on site spending appear in the economic literature (Bell and Leeworthy 1990) and are usually thought to reduce length of stay.

Methods

Munising, Michigan was selected for the study because the local Munising, Michigan offices of the U.S. Forest Service and the National Park Service which contributed funds for the initial data collection, analysis, and report were primarily interested in skiers visiting that area. Because of the difficulty in finding a sampling frame containing a large number of cross-country skiers who were familiar with cross-country skiing in Munising, it was decided to contact people directly who were currently cross-country skiing in the Munising area.

Because of budget and personnel limitations, stationing personnel in Munising at the various trails for any length of time was impossible. The Forest Service agreed that at two of the trails, the questionnaires would be placed in boxes at the trail heads. At two other trails at which store owners cooperated with the Forest Service in operating the trails, the store owners would administer the questionnaires. At a fifth trail, concessionaires operated a warming hut on weekends and administered the questionnaire. During the week, the questionnaire was made available in a box placed outside the warming hut and near the trail head. At the trail managed by the National Park Service, questionnaires were placed in a box near the trail head with a sign asking skiers to participate in the study.

Questionnaire Design

The questionnaires distributed on-site were primarily designed to reflect the objectives of the U.S. Forest Service which was the primary source of funds for the study. Questions were based on the need to gather information to help the U.S. Forest Service make management decisions. The

design and content of the U.S. Forest Service questionnaire was developed in consultation with the Forest Service and faculty and staff at the Travel, Tourism, and Recreation Resource Center and the Department of Park and Recreation Resources at Michigan State University. Staff at Pictured Rocks National Lakeshore were consulted in designing the questionnaire distributed there.

The questionnaires were not pretested because of time constraints. As a further check on the validity on the ancillary attribute items used in the questionnaire, a group of cross-country skiers who had inquired at the Upper Peninsula Travel and Tourism Association office during the 1991-92 ski season were sent a shortened version of the questionnaire which contained an open format question in which respondents were asked to list the most important considerations when deciding on a cross-country ski destination. These responses were compared to the closed format list of ancillary items. Figure 2 displays the close ended ancillary attributes analyzed in the study and the open ended question format.

Sampling Strategy

Questionnaires were distributed at the 5 Munising area U.S. Forest Service cross-country ski trails and a modified version of the questionnaire was distributed at the Munising Trail, operated by the National Park Service. Quantities assigned to each Forest Service trail were based upon U.S. Forest Service use estimates from the 1990-91 ski season. The trails were supplied in such a manner as to have respondents represented from the Christmas holiday until the end of the season with snow melt at the end of March. National Park Service questionnaires were placed in early January. The goal was to recover

approximately 50% of the questionnaires taken by skiers. The return rate realized was approximately 43%.

Approximately half of the questionnaires were distributed at the Valley Spur trail because, based on U.S. Forest Service use estimates, it was by far the busiest trail of those managed by the U.S. Forest Service. On weekends, questionnaires were passed out to every fourth person who entered a warming hut to purchase a cross-country ski permit. In addition, the operators of the warming hut distributed questionnaires to those who showed a great deal of interest in skiing and to those who collected most of the other brochures available at the counter. During the week, when the warming hut was closed, the questionnaires were placed in a wooden box labeled registration which was attached to a sign board just in front and to the right of the warming hut. A letter from the district ranger on the sign board invited skiers to participate in the study. Late in the season, the distribution rate was doubled to obtain more responses.

At the McKeever Hills and the Christmas cross-country ski trials, convenience store operators distributed a questionnaire to every fourth person who purchased a permit. The store operator at Mckeever Hills distributed questionnaires to every fourth skier who entered his store regardless of whether or not the skier purchased a permit. Late in the season the distribution rate was doubled to obtain more responses.

At Hiawatha and Buckhorn cross-country ski trails, the questionnaires were placed in a wooden box attached to a signboard. Posted to the sign board was a letter from the district ranger inviting skiers to participate in the study. These boxes were replenished regularly. In February, the U.S. Forest

Service placed a laminated copy of the first page of the questionnaire on the outside of the boxes to further encourage responses.

The Pictured Rocks National Lakeshore began distributing a modified version of the questionnaire in mid-January by using a box placed at the Munising Trail similar to the one used by the Forest Service. A sign asking people to participate was in clear view. Distribution of questionnaires continued until the end of the cross-country ski season at the end of March. Although the National Park Service trail received more use than any of the U.S. Forest Service trails, the Park Service distributed fewer questionnaires because of lower funding levels.

All respondents were asked to either mail the questionnaire to the Travel, Tourism, and Recreation Resource Center at Michigan State University in a postage-paid envelope which was attached to the last page of the questionnaire or to drop the questionnaire off at the joint National Park Service-U.S. Forest Service visitor center in Munising.

Data Analysis

Ancillary Attribute Importance

To assess the completeness of the close-ended ancillary attribute response scales, a group of cross-country skiers interested in skiing in the Upper Peninsula of Michigan was contacted by mail. Respondents to the mail questionnaire were asked what four considerations come to mind when selecting a cross-country ski destination (Figure 2). Respondents were then asked to list these considerations in order of importance. Respondents were instructed to answer these two questions along with the rest of the questions appearing on the front of the questionnaire before answering the questions on

the back of the single page. The back of the questionnaire included the closed-format question. Respondents were instructed not to return to the first page after turning to the second and that most people would probably leave some answer spaces blank. Questionnaires distributed at Munising area trails did not have an open-format question.

As stated in the first hypothesis, mid price lodging, family restaurants, and quality of cross-country ski trails were expected to be rated as higher in important than an average of all 22 importance ratings. For each respondent, a mean importance rating was calculated from the ratings of the 22 importance items. This new variable was then compared with each of the 22 separate importance rating items in 22 paired t-tests. Manfredo (1989) and Saleh and Ryan (1992) followed similar procedures. The paired t-test assumed that the 2 measures were not independent and were related in that the same individual had given both scores. The paired t-test summed the individual differences between the two variables in question and determined if the summed differences were significantly different from zero (Mendenhall 1979). If the variable was significantly different from zero and the mean difference had a positive sign, the variable was classified as significantly more important than average in making destination decisions. As stated in the first hypothesis, ancillary attributes with which Munising was well supplied were expected to be rated more highly than variables with which Munising was not well supplied. Specifically, family restaurants, mid price lodging, and quality of cross-country ski trails were expected to be rated more highly than the average variable.

Differences Among Response Groups

For the second hypothesis, a two-way analysis of variance procedure was used to compare ancillary attribute importance ratings between local and tourist respondents and between U.S. Forest Service, and National Park Service respondents. It was hypothesized that the groups would exhibit some differences in their importance ratings of the ancillary attributes.

Relative Importance

As stated in the third hypothesis, the importance ratings of ancillary attributes were expected to make a statistically significant contribution to explaining variations in length of stay. Distance, perceived constraints, overall community satisfaction, trail quality satisfaction, number of overnight cross-country skiing trips during the past season, skill level, party spending in Munising during the day the questionnaire was received, and trail quality importance ratings were included in a base model of independent variables. All of these variables have been mentioned to varying degrees in the literature as having an influence on the decision to participate in an activity, the selection of a destination, or the length of stay at a destination. Distance has been used as an approximation of travel cost, travel time, or both in demand studies or as a major component in cost or price estimation. Distance rather than travel cost or travel time is especially useful where nearly all participants use the same mode of transportation to a common destination. Distance and travel cost and travel time are usually highly intercorrelated. Where valuation of the recreation resource is needed, distance can readily by transformed into monetary figures by using a conversion factor which reflects

the average cost per mile of travel to the destination. Distance can also usually be converted into time cost.

To measure the significance of ancillary attribute importance ratings, a regression model was developed which was similar to those that have been used with travel cost analysis. Such models can be used to either forecast or predict demand or to examine relationships among variables (Witt and Witt 1992). The dependent variable was length of stay during the trip which respondents picked up a questionnaire. Those variables with a significant standardized regression coefficient would have a significant effect in determining the amount of time a cross-country skier spends in Munising (Witt and Witt 1992). The size of the standardized regression coefficient indicates the relative importance of a variable in the equation. The larger the coefficient, the stronger association of the independent variable with the dependent variable.

This analysis was performed only for tourist skiers. As noted by Bell and Leeworthy (1990), there is evidence that local and tourist visitors face much different decisions and probably should be kept separate in analyses. Length of stay for local skiers could be measured and analyzed using the number of hours during which they skied during the trip. This variable is available from the data set being used for this study. However, the result would not be comparable to length of stay measured as days at Munising or days away from home for tourist cross-country skiers. Ancillary attribute importance variables would be expected to have less of an effect on local cross-country skier length of stay than for tourist cross-country skier length of stay as local skiers would have access to similar services and facilities in their own homes and would not necessarily rely on the community's

restaurants to acquire meals, lodging establishments for sleeping, or bars for refreshments. The literature has indicated that including both local and nonlocal skiers in the same length of stay regression can confuse the results. Uysal, McDonald, and O'leary (1988) found that skiers who travel shorter distances stay longer. Logic would indicate that skiers who travel farther should stay longer to recoup their larger monetary and travel time investment. Uysal, McDonald, and O'leary (1988) explain this problem in their study by acknowledging that data were included from both resident and tourist respondents. Bell and Leeworthy (1990) note tourists and local respondents are different and should be treated separately.

The regression model used in this study (below) is a linear multivariate model based on the travel cost model. Statistics for the model were calculated with SYSTAT for the Macintosh. The use of this computer program is described in its user's manual (Wilkinson 1989).

The basic parts of the travel cost model as discussed by Fletcher, Adamowicz, and Graham-Tomasi (1990) consist of the variation in distance and therefore costs experienced by travelers from various distances to a recreation site. As distance increases, so does cost, thus reducing the number of visits. The travel costs are analogous to a price for access. The higher the price the fewer visits which occur at that price. The relationship between price and visits allow the formulation of a demand curve. Researchers using travel cost models to analyze demand usually assume equal lengths of stay and chose data which meet this assumption. The number of visits is constrained by the desire for other goods and visits to other recreation sites, money budget constraint and time budget constraint, and other restrictions (Fletcher, Adamowicz, and Graham-Tomasi 1990).

Travel cost models usually include income and often a measure of the cost of time. Neither were available from the data set used for this analysis. Some measure of the availability or use of substitute sites is also often included in travel cost models, but such a variable was also unavailable from the data set used for this analysis. The amount of one-day spending in Munising was included in the model because most travel cost studies include an on-site price variable which usually has a negative effect on length of stay or number of trips (depending on what is being examined). The higher the cost the fewer days or trips customers should be able to afford. Spending in Munising should to some degree reflect income constraints and also the availability of substitute destinations. Higher costs usually reduce the quantity demanded. Spending should be lower for those with lower incomes and lower for those who could travel to substitute sites with lower costs. Spending may be greater for those respondents with greater time values. Such respondents may be able to afford higher on-site costs and be more willing to undergo them to ensure a return on their more valuable investment of time.

Satisfaction was included in the model because of the potential for dissatisfied visitors to shorten their stay and for highly satisfied customers to perhaps lengthen their stay. Satisfaction with services is highly dependent on the manner in which service is provided and not just whether or not services exist (Teare 1990; Arnould, Price, Tierney 1993). The presence of ancillary attributes may be related to initiation of the trip with satisfaction occurring with the consumption of destination attributes. Satisfaction may have a strong influence on trip duration. Two measures of satisfaction were included in the regression model, overall community satisfaction and trail

satisfaction. It was anticipated that trail satisfaction, being more directly tied to the main trip activity of skiing, would have a greater association with length of stay. Overall community satisfaction was included to provide a performance measure of the ancillary attributes. Ideally satisfaction with each ancillary attribute included in the importance measures would exist, but these were condensed into a few broad general satisfaction measures to reduce the length of the questionnaire.

Constraints may have the effect of shortening length of stay for highly satisfied people who perhaps would like to stay an extra day or two but cannot because of obligations at home or work or a lack of financial resources. Constraints may also work to lengthen visit duration for those visitors who are highly dissatisfied. Dissatisfied customers may not be able to switch destinations easily once they have arrived because of time shortage or lack of knowledge about other potential destinations. Returning home may also not be an option for dissatisfied customers because that would amount to the wastage of what for some may be a substantial sunk investment in the trip. This may be especially true for those cross-country skiers who, because of other commitments, have a limited number of days during the cross-country ski season during which they can ski and even fewer days during which they can arrange a trip lasting several days.

Skill level and previous overnight trips represent personal variables which may shift the number of visits and days for any particular distance or travel cost. Skill level and previous overnight trips can be particularly valuable as they reflect a degree of experience and learning about the specific recreation activities to which they are related. In addition, "Consumers with extensive prior experience develop . . . clearly defined expectations and

selection criteria" (Teare 1990:244). These expectations and selection criteria may simplify into a search for a particular brand or any one of a group of brands that have proved satisfactory in the past. A visitor to Munising may book lodging at the Comfort Inn, as opposed to the Day's Inn or Best Western because based on other stays at Comfort Inn motels, the customer knows that this brand performs well on most of the visitor's selection criteria.

Trail quality importance was included to serve as a means of comparison for ancillary attribute importance ratings. Trail quality importance would be expected to be more strongly associated with length of stay than any of the ancillary attributes as it is more closely connected to the overall goal of the tourists' trips, cross-country skiing.

Although psychometric measures are rarely included in travel cost models, Fletcher, Adamowicz, and Graham-Tomasi (1990) support their inclusion. Constraints, ancillary attribute importance, and satisfaction were all measured by asking respondents to indicate how they felt on a one to seven scale. The resulting equation then can be stated as follows:

$$Y= A + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6 + B_7X_7 + B_8X_8 + B_9X_9$$

Y= Number of days within 15 miles of Munising on this trip

A= Constant

X_1= Distance from respondents residence in miles as reported by respondents

X_2= Perceived Constraints (Developed from the addition of responses to items in question 10)

X_3= Satisfaction with cross-country ski trail quality

X_4= Overall Community satisfaction

X_5= Number of overnight cross-country ski trips during last season

X_6= Skill level.

X_7= On site cost for one day per party

X_8= Importance of trail quality

X_9=Ancillary attribute importance ratings (21 items were entered into a stepwise regression analysis as separate variables)

Because of limitations caused by a relatively small number of respondents for this type of analysis, not all 21 ancillary attribute importance variables could be included in the model simultaneously. A separate model was calculated for a base model of key variables which included the first eight variables listed above. Then that model was used in a stepwise regression analysis with the addition of the ancillary importance ratings. The only difference among the models was the ancillary attribute importance variables used. The other variables remained the same for each regression equation.

Respondents were also asked to state the maximum amount they would pay to keep using the cross-country ski trail where they received the questionnaire, with the understanding that the trail may be closed if the amount they were willing to pay was not high enough. For the purposes of this study, the amount skiers were willing to pay to keep using the trail was considered another measure of demand and was substituted as the dependent variable in a regression of the base model and a stepwise regression including all of the ancillary attribute importance ratings. This measure was expected to provide some confirmation of the results achieved through the regression analyses with length of stay as the dependent variable.

Principle component analysis was also considered as a means of incorporating the ancillary attribute importance ratings into the analysis.

However, the variables did not appear to be strongly intercorrelated and the resulting factors did not account for a large portion of the variance.

Limitations

The usefulness of this study is constrained because of the methods of data collection. Data were collected at cross-country ski trails in the Munising, Michigan area or by mail from people who had inquired at the Upper Peninsula Travel and Recreation Association about cross-country skiing opportunities in the Upper Peninsula of Michigan.

Many of the respondents were self-selected by their willingness to take a questionnaire from a box placed near a trail head. This was true for the trail operated by the National Park Service and at the U.S. Forest Service Valley Spur trail when the warming hut was closed. Questionnaires were also distributed at the U.S. Forest Service lesser used trails by the box method. The hut at the Valley Spur Trail was usually open on weekends when most use occurred. When the hut was open, every fourth skier who entered the warming hut received a questionnaire. Because of these distribution methods, the sample was not randomly drawn. Skiers responding to the questionnaire are probably more interested in cross-country skiing, the Munising area, or both than are cross-country skiers in general. Also, the probability of any one particular skier participating in the study increased the longer that one particular skier stayed in the Munising area, resulting in length of stay bias.

Because all of the U.S. Forest Service trails were located within 20 miles of the National Park Service trail, some cross-country skiers likely visited trails managed by both agencies. However, they were more likely to obtain a

questionnaire at those trails they visited more often. Cross-country skiers were classified as a U.S. Forest Service respondent or a National Park Service respondent based upon where they obtained their questionnaire. There were likely some skiers who preferred or usually skied at trails operated by the other agency than the one for which they obtained a questionnaire. There may also have been some skiers who sent in more than one questionnaire or sent in questionnaires for each agency.

Because most of the respondents were contacted at Munising, Michigan, only limited inferences can be drawn about skiers who choose other destinations. However, the mail questionnaire respondents to some degree make up for this problem in spite of the fact that the mail respondents were already interested in the Upper Peninsula and so may be more similar to Munising cross-country skiers than different from Munising cross-country skiers. Some mail respondents were familiar with Munising or had visited Munising during the course of the cross-country ski season.

Data collection began during the last week in December at U.S. Forest Service trails and in mid January at the National Park Service trail, missing early season skiers, and continued until to the end of March. Although there is no evidence that early season skiers differ from mid to late season skiers, that possibility remains unexplored.

In the analyses examining the contribution of ancillary attribute importance ratings to explaining variance in length of stay, two variables often considered critical for such analyses where not available, income and the opportunity cost of travel time. However, some authors discuss the possibility that such omissions may not be quite as serious in some situations where there is little variation in respondents' incomes and most visitors use

the same mode of transportation. Despite the above limitations, the analysis provides some very interesting results, and some avenues for additional investigations which could prove fruitful.

CHAPTER IV: RESULTS

This chapter presents the results of the data analyses described in the previous chapter. After presenting responses to the open-ended question, the discussion is organized in the order the hypotheses were presented in chapter III. The results show that ancillary attributes vary in their importance to cross-country skiers, with those ancillary attributes strongly represented in Munising and serving basic needs, or connected to the main purpose of the trip (cross-country skiing) being most important. Local and tourist cross-country skiers rated the importance of several ancillary attributes differently. In addition, differences also occurred in the way U.S. Forest Service, and National Park Service respondents rated the importance of some ancillary attributes. Some ancillary attribute importance ratings were significantly related to length of stay in a regression model.

In general, respondents were middle-aged and well-educated with above average incomes (Bishop, Forsberg, and Holecek 1992). Only 34% of tourist respondents were first time visitors. The mean U.S. Forest Service tourist respondent traveled 307.9 miles away from home to come to Munising, had 16.4 years of education, and was 41.9 years old. Nearly all U.S. Forest Service tourist respondents were traveling with family or friends. However, 11.5% were traveling by themselves. The mean National Park Service tourist respondent traveled 386.6 miles away from home, had 15.9 years of education and was 40.5 years old. Most were traveling with family or friends.

However, 9.7% of the National Park Service tourist respondents were traveling by themselves.

Responses to Open Format Questions

Only respondents to the mail questionnaire are included in this section as questionnaires distributed in the Munising area did not have an open format question. There was a substantial amount of overlap in the placement of some considerations in the order of importance (Table 1). One respondent would place a consideration as being most important while another respondent would place the same consideration as being least important. Respondents listed a wide variety of considerations, with several responses being unique. Even though a consideration may have been listed as third or fourth in importance, each consideration should still be considered important because it came to mind with relatively little prompting and was important enough to be written down by the respondent. Several considerations appear in each section of the list because they were ordered differently by different people.

The responses in Table 1, in order to give the reader an understanding of the array of responses, are only slightly condensed versions of the actual answers written on the questionnaire. These answers have been further condensed into categories with response frequencies in Table 2. The number of responses recorded for each category can be used to infer those attributes which were important to the most respondents.

For the most part, the free format responses mirrored the closed format list with the exception of trail quality. The close-ended list simply asked for the importance of trail quality in general. Open-ended responses described

Table 1. Responses to open-ended question by mail questionnaire respondents.

LISTED FIRST	LISTED SECOND	LISTED THIRD	LISTED FOURTH
Trail quality	**Trail quality**	**Trail quality**	**Trail Quality**
Snow	Groomed	Difficulty	Difficulty
Trail difficulty	Trail Maintenance	Miles of trails	Facilities
Quality and diversity of trails	Snow	Distance from cottage	Skiing challenge
Well groomed trails	Facilities	Accessibility	Access with dogs
Hills	Wooded	Groomed	Groomed
Good skiing	Hilly	Low traffic	Rest areas
Difficulty	Reasonable use fees	Scenery variety	Good snow base
Trails	Length	Facilities nearby	Trail fee
Lighted area for night skiing	Accessibility	Snow	Low number of skiers
Variety	Numbers of	Challenging terrain	**Lodging**
Facilities	Usage of	Striding only __ no skating	Sauna
Pretty	Different skill levels	Total miles	Good
Isolation	Marked trails	Number of km	Motels
Terrain	Difficulty	Variety in hills, scenery	Comfortable
Wilderness	Beauty	Lay out	**Restaurants**
Lodging	Variety	Average snow fall	Good food
Reasonable prices	**Lodging**	Heavy snow	Family
Rated cottages	Reasonable prices	**Lodging**	**Rental equipment**
Distance from home	A great B&B	Cabins	**Community**
Country-side or area	Close to trails	Lodge	**Other things to do**
Scenery	Skiing out the door	Good	**No crowds**
No snowmobiles	Condominium style	Unusual accommodations	**No snowmobiles**
Location	Pool	Cost	**Crowded**
Cost	Whirlpool	**Restaurants**	**Distance from home**
Easy access	Moderate priced	Good	**Surroundings**
How well organized (this respondent appeared to be thinking in terms of a group tour)	**Restaurants**	Great	**Reasonable Prices**
	Reasonable prices	**Distance from home**	**Scenery**
	Quaint	**Cost**	**Community activities**
Vacation abilities	**No crowds**	**Physical Characteristics**	**Atmosphere**
Peace and Quiet	**Distance from home**	**Scenic**	**Accommodations for kids on trails and in lodging**
	Cost	**Shopping**	**Cost**
	Near large city	**Entertainment**	**Weather**
	Natural beauty	**Free-way Access**	**Accessibility**
	Equipment rental	**Not crowded**	
	Activities for children	**Time Available**	
	Local attractions		

Table 2

Frequency destination considerations mentioned, mail questionnaire respondents

Attribute category	Order listed First	Second	Third	Fourth	Weighted total[a]	Total
Snow	18[b]	04	04	02	9.4	28
Trails	18	32	21	08	21.8	79
Scenic beauty	06	02	02	05	3.9	15
Distance from home	15	05	06	02	8.9	28
Crowding	03	02	02	04	2.6	11
Lodging	06	13	14	06	9.7	39
Snow-mobiles	01	00	00	01	0.5	02
Cost	01	04	01	03	2.1	09
Restaurants	00	01	09	03	2.4	13
Access	01	01	02	02	1.3	06
Shopping	00	00	01	00	0.2	01
Other	03	05	05	07	4.4	20
Total	72	69	67	43	67.2	251

[a]Weighted total, number of response multiplied by 4 for first, 3 for second, 2 for third, and 1 for fourth, added together then divided by 10. [b]Number of mail respondents who mentioned attribute category as a reason for choosing a cross-country ski destination.

trail quality in detail including snow, terrain, and facilities. Trail quality was included in the close-ended format primarily as a means of comparison for the other items. Other studies have extensively examined aspects of trail quality (Ballman 1980; Rosenthal and Driver 1980; McLaughlin and Paradice 1980; Rauhauser 1979; Nelson 1988).

High Ancillary Attribute Importance Ratings

In the first hypothesis, importance ratings were expected to be higher for those ancillary attributes which directly affected basic human needs, directly affected the main purpose of the trip (cross-country skiing), and were available in Munising at the time of data collection. Mid price lodging, family restaurants, and quality of cross-country ski trails were expected to receive importance ratings higher than an average of all ancillary attribute ratings. The remaining ancillary attributes were either not well represented in Munising or were not as closely connected to basic sustenance needs or to the cross-country ski experience.

Ancillary Attribute Ratings, All Respondents

An overall average attribute rating was calculated for each respondent by adding the rating given each attribute and then dividing the sum by 22 (the number of attributes). The average rating was compared with the importance rating for each attribute using a paired t-test. For the paired t-test, the average attribute rating was subtracted from the particular attribute rating, respondent by respondent. These results were summed across all respondents. A t statistic and a probability value were calculated based on the sum of the above differences, the number of respondents, and the

variability in their responses. The probability value indicated the likelihood that the resulting sum was so small that essentially there was no difference in the two measures, the average attribute rating and the particular attribute rating (Wilkinson 1989). A small value of p (0.05 or less) indicates that the probability of the attribute rating being average is quite small and that the ancillary attribute should be considered either to have been rated as higher or lower in importance than the average ancillary attribute rating. Since, the interest is in those ancillary attributes which were rated more highly, the two-tailed p value calculated with the use of SYSTAT for Macintosh was divided by two for the probability of a one-tailed test, or the probability that a value on the high side of average is average. The probability that an ancillary attribute rating is greater than average would be given by $1\text{-}p/2$.

For this analysis, a probability level of 0.05 (for a one-tailed test) was chosen as the cut off point for a value being significantly different from 0. A probability level of 0.05 indicates that there is a 5% or less probability that a difference between the average of all attribute ratings and one particular ancillary attribute rating would be considered to be greater than 0 when it is not. The hypothesis for this analysis is only concerned with those attributes which are more important than average. Table 3 reports the t statistic and its relationship to the cutoff point for each ancillary attribute. The reader is urged to interpret all p values in this study with caution. Such values assume that the data upon which they are based were drawn from a randomly selected sample of respondents, which was not the case with this study.

Low price motel, mid price motel, basic kitchen, sauna, family restaurant, trail quality, and overall community can be considered more important than the average attribute (Table 3). These results give some

Table 3

Mean importance ratings, all respondents

Ancillary Attribute	M	SD	MD[a]	SDD[b]	t
Low price motel	3.92	2.31	0.78	2.32	5.69*
Mid price motel	4.30	2.01	1.15	1.72	11.35*
Ski lodge	2.56	1.88	-0.67	1.54	- 7.36
Basic kitchen	3.34	2.17	0.20	1.95	1.70*
Child care	1.62	1.43	-1.50	1.33	-19.16
Swimming pool	2.94	2.05	-0.18	1.71	- 1.77
Sauna	3.52	2.30	0.36	1.88	3.20*
Waxing room	1.97	1.53	-1.16	1.36	-14.48
Laundry	2.06	1.74	-1.07	1.41	-12.90
Fast food	2.81	1.92	-0.32	1.71	- 3.20
Family restaurant	4.90	1.81	1.72	1.59	18.43*
Gourmet restaurant	2.58	1.92	-0.56	1.61	- 5.86
Night Club	2.04	1.73	-1.13	1.43	-13.44
Family entertainment	2.75	2.04	-0.40	1.64	- 4.16
Cultural attraction	3.08	2.11	-0.13	1.60	- 1.38
Bar	2.74	2.01	-0.43	1.82	- 4.00
Gift shops	2.18	1.63	-0.97	1.28	-12.82
Clothing shops	2.27	1.62	-0.87	1.21	-12.28

(continued on next page)

Table 3 (Continued)

Mean importance ratings, all respondents

Ancillary Attribute	M	SD	MD[a]	SDD[b]	t
Ski Shops	3.28	1.85	0.12	1.49	1.40
Art and craft shops	3.15	1.96	-0.04	1.54	- 0.40
Quality of ski trails	6.65	0.82	3.48	1.09	54.39*
Overall community	4.80	1.66	1.62	1.39	19.68*

Note. Mean importance ratings (1=not important and 7= extremely important) and paired t tests on differences between individual attribute importance ratings and the average importance rating of all 22 items for all respondents (N=288). [a]MD = mean difference. [b]SDD=standard deviation of the differences. *$p \leq .05$, positive one-tailed.

support to the first hypothesis with the exception of low price motel, basic kitchen, sauna and overall community being of greater importance than average. The relatively high ratings of these attributes were not predicted in the first hypothesis. However, it is possible that some respondents may have considered Munising mid price lodging to be low price. Basic kitchen is related to basic sustenance needs, perhaps more so than restaurants. For some respondents, a sauna may be an integral part of the cross country ski experience. Overall community may be an expression of a synthesis of basic needs that must be met by the destination community and may include such issues as safety and cleanliness. The relatively high importance ratings given to mid price motel, family restaurant, and trail quality support the first hypothesis.

Ancillary Attribute Ratings, Local Munising Respondents

These respondents are cross-country skiers who received a questionnaire at either the Munising Trail, managed by Pictured Rocks National Lakeshore or at one of the trails managed by the Munising district of the U.S. Forest Service and who indicated that they did not spend or intend to spend any nights away from home while on this particular cross-country skiing trip. Most local respondents live either in Munising, Marquette, Escanaba, or one of the other towns or villages within 40 to 50 miles of Munising. Local residents are likely to have different needs than skiers who stay overnight during their holiday. These needs may be reflected in the importance they ascribe to various ancillary attributes. However, the question was stated in such a way as to apply to selecting a destination in general. Some local cross-country skiers who did not stay overnight on the

particular trip for which they filled out the questionnaire may stay overnight on other trips at other destinations. Their importance ratings may reflect this behavior. Such ratings would be of interest to managers of establishments in the Munising area assuming that these individuals represent potential customers either from Munising or surrounding communities.

Information about this group of skiers can still be valuable in that it suggests what cross-country skiers from other towns and villages in the Upper Peninsula may be looking for when deciding upon a cross-country skiing destination community. Many of the local skiers were in fact from surrounding communities and not the immediate Munising area and contributed to the local Munising economy during their visit. Cross-country skiers who resided in Munising were likely to be similar to other Upper Peninsula residents.

Mid price motel, sauna, family restaurant, quality of cross-country ski trails, and overall community were statistically rated higher in importance than average (Table 4) by local cross-country skiers. These results give some support to the first hypothesis with the exception of sauna and overall community being of greater importance than average. The relatively high ratings of these ancillary attributes were not predicted in the first hypothesis. The relatively high rating of sauna may reflect the scandinavian heritage of many of the people who live in the Upper Peninsula of Michigan. The relatively high rating of overall community may emphasize the critical importance of packages of (rather than solitary) ancillary attributes to cross-country skiers. The relatively high ratings of mid price motel, family restaurant, and quality of cross-country ski trails are in keeping with the predictions in the first hypothesis. The lodging importance ratings may

Table 4

Mean importance ratings, local respondents

Ancillary Attribute	M	SD	MD[a]	SDD[b]	t
Low price motel	3.31	2.34	0.04	2.14	0.18
Mid price motel	3.89	2.15	0.64	1.76	3.47*
Ski lodge	2.71	2.05	-0.60	1.58	- 3.66
Basic kitchen	3.16	2.15	-0.09	1.63	- 0.54
Child care	1.99	1.79	-1.24	1.63	- 7.31
Swimming pool	3.16	2.16	-0.02	1.71	- 0.08
Sauna	4.03	2.45	0.84	1.78	4.54*
Waxing room	2.02	1.62	-1.21	1.32	- 8.78
Laundry	2.48	2.08	-0.79	1.57	- 4.80
Fast food	3.06	2.04	-0.19	1.63	- 1.11
Family restaurant	4.62	1.92	1.30	1.47	8.48*
Gourmet restaurant	2.74	1.97	-0.47	1.54	- 2.93
Night club	2.28	1.93	-0.99	1.57	- 6.08
Family entertainment	3.22	2.13	-0.04	1.62	- 0.22
Cultural attraction	3.47	2.29	0.16	1.59	0.96
Bar	2.83	2.16	-0.45	1.97	- 2.18
Gift shops	2.30	1.71	-0.93	1.34	- 6.62
Clothing shops	2.45	1.74	-0.78	1.30	- 5.73

(continued on next page)

Table 4 (Continued)

Mean importance ratings, local respondents

Ancillary Attribute	M	SD	MD[a]	SDD[b]	t
Ski Shops	3.28	1.92	0.04	1.47	0.26
Art and craft shops	3.20	2.06	-0.05	1.54	- 0.30
Quality ski trails	6.60	0.98	3.34	1.21	26.54*
Overall community	4.73	1.89	1.47	1.59	8.96*

Note. Mean importance ratings (1=not important and 7= extremely important) and paired t tests on differences between individual attribute importance ratings and the average importance rating of all 22 items for local Munising respondents (N=92). [a]MD = mean difference. [b]SDD = standard deviation of the differences. *$p \leq .05$, positive one-tailed.

indicate that many local cross-country skiers answered this question for overnight trips they may have already taken or may take in the future.

Ancillary Attribute Ratings, Tourist Respondents

These respondents received a questionnaire at one of the Munising area trails managed by either the National Park Service or the U.S. Forest Service and stayed at least one night away from home while on their cross-country ski trip. Some of these skiers came from locations (Escanaba and Marquette for example) which also supplied local skiers (those that did not stay overnight away from home) to the Munising trails. The majority of tourist cross-country skiers came from lower Michigan and Wisconsin, with a handful from Illinois, Indiana, and Ohio, and a very few from other states such as Tennessee, Texas, and Virginia.

Low price motel, mid price motel, basic kitchen, family restaurant, ski shops, quality of cross-country ski trails, and overall community were rated statistically higher in importance than the average importance rating of the 22 attributes used in this study (Table 5). These results give some support to the first hypothesis with the exception of low price motel, basic kitchen, ski shops and overall community being of greater importance than average. The relatively high importance ratings of these attribute were not predicted in the first hypothesis. Some respondents may have considered Munising mid price lodging to be low price lodging, or some of the respondents may have been willing to put up with less than what they would have considered to be ideal lodging to take advantage of good cross-country skiing conditions. Kitchenettes were available in some lodging establishments in the Munising area. The obvious relationship of kitchenetts to food supports the intent of

Table 5

Mean importance ratings, tourist respondents

Ancillary Attribute	M	SD	MD[a]	SDD[b]	t
Low price motel	4.48	2.21	1.42	2.32	6.81*
Mid price motel	4.41	1.99	1.34	1.74	8.57*
Ski lodge	2.24	1.66	-0.94	1.41	- 7.41
Basic kitchen	3.47	2.23	0.40	2.16	2.07*
Child care	1.46	1.18	-1.59	1.10	-16.16
Swimming pool	2.60	1.97	-0.43	1.70	- 2.80
Sauna	3.34	2.25	0.18	1.92	1.03
Waxing room	1.96	1.50	-1.11	1.32	- 9.30
Laundry	1.91	1.57	-1.14	1.31	- 9.66
Fast food	2.61	1.79	-0.42	1.73	- 2.71
Family restaurant	5.16	1.71	2.12	1.55	15.19*
Gourmet restaurant	2.52	2.00	-0.61	1.61	- 4.24
Night Club	1.86	1.57	-1.26	1.32	-10.66
Family entertainment	2.40	1.86	-0.66	1.56	- 4.72
Cultural attraction	2.77	2.01	-0.35	1.52	- 2.55
Bar	2.71	2.02	-0.39	1.83	- 2.36
Gift shops	1.95	1.49	-1.14	1.21	-10.50
Clothing shops	2.05	1.55	-1.06	1.10	-10.76

(continued on next page)

Table 5 (continued)

Mean importance ratings, tourist respondents

Ancillary Attribute	M	SD	MD[a]	SDD[b]	t
Ski Shops	3.51	1.87	0.34	1.54	2.44*
Art and craft shops	3.06	1.98	-0.04	1.56	- 0.29
Quality of trails	6.67	0.78	3.58	1.05	37.83*
Overall community	4.84	1.48	1.76	1.26	15.48*

Note. Mean importance ratings (1=not important and 7= extremely important) and paired t tests on differences between individual attribute importance ratings and the average importance rating of all 22 items for U.S. Forest Service and National Park Service tourist respondents (N=124). [a]MD = mean difference. [b]SDD=standard deviation of the differences. *$p \leq .05$, positive one-tailed.

the first hypothesis. The relatively high rating of ski shop is different from the way local skiers responded to this item. This perhaps reflects not so much a desire to purchase a pair of skis, but the need to have available a local source of cross-country ski information. Tourists may also feel that a ski shop is a method of providing trip insurance. Should a cross-country skier need to repair or replace equipment or other paraphernalia, the skier would be able to do so without having to travel a great distance. The relatively high rating of overall community may emphasize the critical importance of packages of (rather than solitary) ancillary attributes to cross-country skiers.

Differences Among Cross-country Skier Groups

Agency Attribute Importance Differences

Data analyzed in this study potentially represent four groups of cross-country skiers: tourist cross-country skiers, local cross-country skiers, U.S. Forest Service cross-country skiers, and National Park Service cross-country skiers. Because these skiers were contacted at different places (five U.S. Forest Service trails and one National Park Service trail) using somewhat different questionnaires, the ancillary attribute importance ratings may vary among the four groups, as indicated in the second hypothesis. The literature describing the recreation opportunity spectrum would suggest that the differences in importance ratings may be associated with desires for different recreational experiences among the three groups. While the recreation opportunity spectrum concept has not been extended to the service/accommodation industry from its original wild land recreation application, it is logical to suppose that groups taking advantage of different recreation opportunities may also desire different services when not on the cross-country ski trail.

Tourist cross-country skiers could also be expected to have different importance ratings than local respondents. Tourists who are away from home must rely more fully on services found in destination communities for sustenance than local cross-country skiers who can more easily either return home or bring food and drink with them.

Importance ratings of the 22 ancillary attributes used in this study were compared across U.S. Forest Service, National Park Service, tourist, and local respondents using the two-way analysis of variance procedure in the SYSTAT for Macintosh statistical package (SYSTAT 1992). This analysis compared tourist and local respondents while statistically holding agency constant and also compared respondents contacted at trails managed by the two agencies while holding constant whether or not they were tourist or local cross-country skiers. Tourists rated low price motel and family restaurant higher in importance ($p \leq 0.05$) while local respondents rated ski lodge, child care, swimming pool, sauna, laundry, night club, family entertainment, and cultural attraction higher in importance ($p \leq 0.05$, Table 6). The higher importance ratings by local cross-country skiers may have resulted from consideration of what they would like to see more of in Munising, what they think would be important to tourist cross-country skiers, or what they would look for themselves when traveling to other communities for cross-country skiing. Tourist cross-country skiers rated higher in importance than local cross-country skiers, those attributes (low price motel and family restaurant) which were of key importance to their current trip. Although low price lodging was lacking in Munising, there was a good supply of mid price lodging which some respondents may have considered to be low price

Table 6

Comparison of ancillary importance ratings by groups

Ancillary Attribute	TM[a]	LM[b]	F[c]	FM[d]	PM[e]	F[f]
Low price motel	4.56	3.84	15.20*	3.82	4.12	0.75
Mid price motel	4.36	3.83	3.58	4.20	3.99	0.48
Ski lodge	2.11	2.59	3.89*	2.60	2.10	3.24
Basic Kitchen	3.50	3.19	1.14	3.29	3.40	0.12
Child Care	1.44	1.98	7.41*	1.74	1.68	0.06
Swimming pool	2.58	3.14	4.21*	2.91	2.81	0.11
Sauna	3.20	3.90	5.11*	3.82	3.27	2.39
Waxing room	2.00	2.03	0.10	2.00	2.02	0.04
Laundry	1.86	2.43	5.57*	2.24	2.05	0.45
Fast food	2.54	2.97	3.26	2.93	2.55	1.68
Family restaurant	5.10	4.54	4.86*	4.97	4.63	1.52
Gourmet restaurant	2.38	2.61	0.72	2.76	2.23	3.13
Night club	1.68	2.11	3.50	2.24	1.55	6.80*
Family entertainment	2.32	3.14	9.79*	2.90	2.56	1.24
Cultural attraction	2.66	3.56	6.11*	2.78	1.94	3.23
Bar	2.43	2.56	0.22	3.04	1.94	12.74*
Gift shops	1.87	2.23	2.78	2.19	1.92	1.27
Clothing shops	2.00	2.40	3.39	2.30	2.11	0.54

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Table 6 (Continued)

Comparison of ancillary importance ratings by groups

Ancillary Attribute	TM[a]	LM[b]	F[c]	FM[d]	PM[e]	F[f]
Ski shops	3.51	3.28	0.85	3.39	3.41	0.00
Art and craft shops	3.00	3.15	0.30	3.18	2.97	0.46
Quality of trails	6.54	6.49	0.22	6.76	6.26	16.34*
Overall community	4.77	4.66	0.22	4.85	4.58	1.16

Note. Two-way analysis of variance comparing ancillary attribute importance ratings between tourist and local respondents and between U.S. Forest Service and National Park Service Respondents. [a]TM is the adjusted least square mean for tourist respondents. [b]LM is the adjusted least square mean for local respondents. [c]F is the F statistic for the comparison of tourist and local adjusted least square means. [d]FM is the adjusted least square mean for U.S. Forest Service respondents. [e]PM is the adjusted least square mean for National Park Service respondents. [f]F is the F statistic for the comparison of U.S. Forest Service and National Park Service adjusted least square means. *Difference between groups significant at $p \leq 0.05$.

lodging. Other respondents may have decided to put up with less than ideal lodging to take advantage of good skiing conditions in the Munising area.

U.S. Forest Service respondents rated night club, bar and quality of cross-country ski trails higher in importance than National Park Service respondents ($p \leq 0.05$, Table 6). U.S. Forest Service skiers may have been more socially motivated than National Park Service skiers. However, there are no measures available from the data set to adequately explore this conjecture. Higher importance ratings for trail quality may be a reflection of the $3.00 fee charged at U.S. Forest Service trails. The fee requirement may have increased trail quality expectations which resulted in higher quality importance rankings by U.S. Forest Service respondents.

The differences in importance ratings between local and tourist respondents support the second hypothesis that differences in ancillary attribute importance ratings occur among subgroups. The differences in importance ratings between U.S. Forest Service and National Park Service cross-country skiers give less support for the second hypothesis as some differences between the two groups would be expected to be significant just by chance (it would be surprising not to find any differences). However, because the ancillary attributes (night club and bar) which were rated significantly higher by U.S. Forest Service respondents ($p \leq 0.05$) could be considered to represent ancillary attributes which are similar in nature, there is a stronger likelihood that these differences are actual differences and did not occur by chance. These differences may only have been ephemeral, perhaps only existing during the season these data were collected or among the skiers who happened to respond to the questionnaire. Additional research would be necessary to determine if these differences are persistent

and what if any deeper meaning they may hold. Location of U.S. Forest Service trails contrasted to the location of the National Park Service trail and management strategies may have attracted skiers with different motivations. Three of the U.S. Forest Service trails were located near either a convenience store or a lodge (which was patronized by a great many snowmobilers and a much smaller quantity of cross-country skiers). However, the most popular U.S. Forest Service trail (Valley Spur) did not have such an establishment nearby. A fee was charged at all of the U.S. Forest Service trails, with the exception of one which was ungroomed. The National Park Service did not require a fee to use the trail (Munising Trail) under its management. This trail was regarded by some skiers as being narrower and more scenic than many of the U.S. Forest Service trails. The National Park Service trail may have attracted cross-country skiers who were more motivated by nature appreciation opportunities than socialization opportunities, but there is no means of investigating this conjecture further without additional data collection.

Ancillary Attribute Importance Relationship to Length of Stay

In the results so far examined, there has been evidence that ancillary attributes are important to cross-country skiers and that importance varies according to whether or not the cross-country skier is a tourist or a resident of the local area. As stated in the final hypothesis, ancillary attribute importance ratings were expected to make a significant contribution in explaining the variance in length of stay, when combined in a model with distance, perceived constraints, trail satisfaction, overall community satisfaction, number of previous overnight cross-country skiing trips, skill level,

spending, and quality of cross-country ski trails. All of these variables have been mentioned to varying degrees in the literature as having an influence on participation, the number of trips to a particular outdoor recreation site, or the length of stay at a destination.

To determine the significance of each variable, a regression model was developed. Those independent variables with a statistically significant standardized regression coefficient had a significant association with the amount of time cross-country skiers spent in Munising. The size of the standardized regression coefficient indicates the relative importance of the variable in the equation. The larger the coefficient, the larger the association of the independent variable with the dependent variable. A regression of the basic or core model was performed to compare with the model resulting when ancillary attribute importance ratings were added to the analysis. The basic or core model consisted of distance, total constraints, trail satisfaction, satisfaction with the overall community, trips previous season, skill level, spending in Munising, and trail quality. Stepwise regression was used for the analysis which included the ancillary attribute importance ratings because the number of variables was two large to include all of them in a single standard regression model without causing overspecification problems.

Several of the variables are somewhat correlated with each other, but not to the degree that multicolinearity would be a problem (Table 7). Because a stepwise procedure was used to generate the models which included ancillary attribute importance ratings, p values should be viewed with caution. Stepwise Regression tends to result in different p values from what they would have been if the model were calculated with a standard regression

Table 7

Peason correlation matrix of independent variables

	1	2	3	4	5	6	7	8	9	10
1	1									
2	0.028	1								
3	0.161	-0.07	1							
4	0.161	-0.169	0.165	1						
5	-0.045	-0.08	-0.108	0.197	1					
6	-0.195	-0.285	0.014	0.051	0.388	1				
7	-0.068	-0.093	0.075	0.136	-0.037	0.105	1			
8	-0.071	-0.052	0.029	0.081	0.081	0.187	0.056	1		
9	-0.138	-0.026	-0.106	0.056	0.008	0.002	-0.08	0.109	1	
10	0.063	0.133	0.128	0.077	0.22	0.189	-0.125	-0.001	-0.051	1
11	0.064	0.171	-0.03	0.138	0.122	0.128	-0.035	0.183	0.003	0.258
12	-0.097	0.166	-0.218	-0.01	0.009	-0.064	0.006	0.03	0.12	-0.23
13	0.038	0.085	-0.015	-0.096	-0.188	0.152	0.005	0.142	-0.143	0.262
14	0.107	0.149	0.02	0.061	-0.044	0.029	0.12	0.037	0.072	-0.005
15	-0.183	-0.019	-0.192	0.011	-0.189	-0.127	0.16	0.046	-0.031	-0.281
16	-0.034	-0.088	-0.142	-0.035	-0.177	0.145	0.209	0.015	-0.021	-0.102
17	-0.067	0.045	-0.255	-0.041	0.113	0.134	-0.041	0.047	0	-0.123
18	0.207	0.291	-0.066	0.164	-0.11	-0.19	0.128	-0.022	0.064	-0.025
19	-0.096	0.266	-0.056	0.09	-0.119	-0.243	0.001	-0.02	0.178	0.022
20	0.074	0.164	-0.068	-0.006	-0.025	0.087	0.038	0.281	-0.011	0.3
21	-0.012	0.062	-0.028	-0.057	-0.122	-0.019	0.022	0.055	0.072	-0.293
22	-0.039	0.191	-0.105	-0.039	0.032	-0.091	0.04	-0.068	0.135	0.015
23	0.01	0.167	-0.035	-0.088	-0.123	-0.228	0.081	-0.067	0.092	0.042
24	-0.048	0.255	-0.11	-0.195	-0.118	-0.1	0.067	0.021	0.068	0.01
25	-0.061	0.171	-0.03	0.02	-0.097	-0.066	0.217	-0.028	0.148	0.026
26	0.062	0.182	-0.017	0.046	-0.244	-0.24	0.172	-0.061	0.104	-0.317
27	0.048	0.203	-0.072	0.093	-0.163	-0.219	0.189	-0.052	0.114	-0.275
28	0.058	0.12	0.025	0.131	-0.044	-0.064	0.171	0.143	0.017	-0.133
29	-0.006	0.259	-0.03	-0.241	-0.288	-0.267	0.136	-0.008	0.048	-0.09
30	-0.05	0.274	-0.125	0.135	-0.199	-0.398	0.168	0.142	0.166	-0.174

(continued on next page)

Table 7 (Continued)

Peason correlation matrix of independent variables

	11	12	13	14	15	16	17	18	19
11	1								
12	0.029	1							
13	0.154	-0.018	1						
14	0.032	0.288	0.254	1					
15	0.26	0.12	0.048	0.227	1				
16	0.218	0.091	0.279	0.246	0.535	1			
17	0.251	0.472	0.052	0.374	0.286	0.359	1		
18	0.244	0.215	0.149	0.335	0.192	0.233	0.414	1	
19	-0.03	0.191	-0.236	0.161	0.086	-0.181	0.044	0.158	1
20	0.511	-0.085	0.335	0.057	0.059	0.086	0.059	0.202	0.141
21	0.226	0.456	-0.034	0.244	0.43	0.333	0.476	0.31	0.008
22	0.159	0.103	-0.154	0.139	0.251	0.147	0.086	0.225	0.189
23	0.177	0.138	0.127	0.43	0.304	0.211	0.116	0.24	0.214
24	0.22	0.3	0.159	0.303	0.356	0.277	0.273	0.381	0.112
25	0.099	0.184	0.055	0.178	0.123	0.263	0.003	0.168	0.179
26	0.031	0.297	0.019	0.262	0.33	0.231	0.024	0.355	0.237
27	0.183	0.36	0.07	0.253	0.375	0.215	0.143	0.491	0.235
28	0.134	0.24	0.033	0.186	0.25	0.168	0.183	0.332	0.164
29	0.144	0.181	0.044	0.24	0.355	0.243	0.076	0.372	0.109
30	0.2	0.208	-0.075	0.08	0.321	0.107	0.1	0.293	0.271

(continued on next page)

Table 7 (Continued)

Peason correlation matrix of independent variables

	20	21	22	23	24	25	26	27	28	29
20	1									
21	0.098	1								
22	-0.065	0.297	1							
23	0.151	0.111	0.36	1						
24	0.146	0.458	0.386	0.447	1					
25	-0.011	0.14	0.547	0.187	0.287	1				
26	-0.024	0.373	0.258	0.423	0.404	0.258	1			
27	0.164	0.469	0.284	0.407	0.48	0.181	0.812	1		
28	0.326	0.269	0.028	0.156	0.359	0.021	0.349	0.502	1	
29	0.105	0.432	0.314	0.421	0.592	0.276	0.57	0.576	0.35	1
30	0.153	0.2	0.315	0.313	0.329	0.289	0.358	0.431	0.33	0.387

Note. 1=distance, 2=constraints, 3=trail satisfaction, 4=overall community satisfaction, 5=trips past season, 6=skill level, 7=spending, 8=trail quality, 9=permit price, 10=low price motel, 11=mid price motel, 12=ski lodge, 13=basic kitchen, 14=child care, 15=swimming pool, 16=sauna, 17=ventillated waxing room, 18=laundry, 19=fastfood restaurant, 20=family restaurant, 21=gourmet restaurant, 22=night club, 23=family entertainment, 24=cultural attraction, 25=bar, 26=gift ship, 27= clothing shop, 28=ski ship, 29=arts and crafts shop, 30=overall community

procedure (SYSTAT 1992). However, the results do indicate which ancillary attribute importance rating variables are useful in examining length of stay.

This analysis was performed only for tourist cross-country skiers. Length of stay, by definition, for local cross-country skiers was one day. This lack of variation would make inclusion of local respondents meaningless. Also, the analysis reported above indicated that local and nonlocal respondents rated the importance of several ancillary attributes differently. Other authors have indicated that including both local and nonlocal skiers in the same length of stay regression analysis can lead to results which do not make much sense.

Ancillary Attribute Contribution to Tourist Cross-country Skier Length of Stay

Four models are presented below. First a base model of basic variables which have been discussed as influencing length of stay, participation, or demand in the recreation or recreation economics literature was developed. This base model is as follows:

Length of stay = Constant + B_1Distance + B_2Total constraints + B_3Trail satisfaction + B_4 overall community satisfaction + B_5Number of overnight trips during the past season + B_6Skill level + B_7Spending in Munising + B_8Quality trail importance.

The same base model was then forced into a stepwise regression procedure with the remaining 21 ancillary attribute importance variables to determine which of these variables could make significant additions to the model. Length of stay was then replaced as the dependent variable with willingness to pay trail fees to determine how the model would change if a different

measure of demand was used as the dependent variable. In addition the current price at the time of data collection to use the trail ($3.00 for U.S. Forest Service respondents and $0.00 for National Park Service respondent) was added to the model because previous analysis (Bishop, Forsberg, and Holecek 1992) had shown this variable to have had a significant impact on the amount cross-country skiers would be willing to pay in the future to use the trails. The new base or core model with the willingness to pay trail fees as the dependent variable was developed to see if a somewhat different measure of demand for cross-country skiing at Munising would effect the model. The new base or core model was then included in a stepwise regression model with the ancillary attribute importance ratings.

The analysis of the base model indicated that it does explain a significant ($p \leq 0.05$) amount of the variance with an adjusted R^2 of 0.24 which indicates that 24% of the variance in length of stay was explained by the model (Table 8). Distance and the amount of spending in Munising the day the questionnaire was received were significant independent variables ($p \leq 0.05$). Overnight trips during the previous season ($p \leq 0.10$) and skill level ($p \leq 0.10$) were almost significant in explaining length of stay variance. As would be expected from the findings of Noe (1987), satisfaction with trails had a greater association with length of stay than overall community satisfaction, but both measures were insignificant. Quality of cross-country ski trail importance also had little effect in the base model.

The base model was then forced into a stepwise regression procedure with the ancillary attribute importance rating variables. The resulting model had an adjusted R^2 of 0.378 which indicated that an additional 13.8% of the variance in length of stay was explained (Table 9). Distance, overnight cross-

Table 8

Length of stay base model regression

Variable	*B*[a]	SE[b]	*SB*[c]	Tol.[d]	t[e]	*p*[f]
Constant	-1.92	2.10	0.00		-0.91	0.36
Distance	0.00	0.00	0.36	0.91	4.26	0.00
Constraints	0.01	0.01	0.09	0.88	1.03	0.30
Trail satisfaction	0.11	0.14	0.07	0.91	0.81	0.42
Overall community satisfaction	0.03	0.13	0.02	0.83	0.24	0.81
Trips previous season	0.08	0.05	0.15	0.79	1.65	0.10
Skill level	0.32	0.19	0.16	0.76	1.68	0.10
Spending	0.01	0.00	0.35	0.92	4.09	0.00
Trail quality	0.12	0.25	0.04	0.96	0.47	0.64

Note. Analysis with length of stay in Munising, Michigan as the dependent variable included U.S.Forest Service and National Park Service tourist respondents (N = 116, adjusted $R^2 = 0.24$, $F = 5.55$, $p_{model} \leq 0.05$). [a]B=Regression coefficient. [b]SE=Standard error. [c]SB=Standardized regression coefficient. [d]Tol.=Tolerance. [e]t=t statistic. [f]p=individual variable probability.

Table 9

Length of stay stepwise regression with ancillary attributes

Variable	*B*[a]	SE[b]	*SB*[c]	Tol.[d]	te	*p*[f]
Constant	-2.15	1.99	0.00		-1.08	0.28
Distance	0.00	0.00	0.32	0.82	3.90	0.00
Constraints	0.03	0.02	0.16	0.73	1.85	0.07
Trail satisfaction	0.12	0.13	0.07	0.89	0.97	0.34
Community satisfaction	0.05	0.13	0.03	0.74	0.39	0.70
Trips previous season	0.11	0.05	0.19	0.71	2.15	0.03
Skill level	0.26	0.19	0.13	0.65	1.38	0.17
Spending	0.01	0.00	0.34	0.91	4.32	0.00
Trail quality	0.20	0.24	0.07	0.91	0.84	0.40
Mid price motel	-0.17	0.08	-0.18	0.77	-2.07	0.04
Basic kitchen	0.21	0.08	0.24	0.70	2.72	0.01
Child care	-0.32	0.13	-0.20	0.75	-2.38	0.02
Laundry	0.21	0.12	0.17	0.64	1.83	0.07
Fast food	-0.21	0.09	-0.20	0.76	-2.28	0.02
Night club	0.24	0.11	0.19	0.77	2.25	0.03
Cultural attraction	-0.19	0.09	-0.19	0.66	-2.08	0.04

Note. Analysis with length of stay in Munising, Michigan as the dependent variable included U.S.Forest Service and National Park Service tourist

(continued on next page)

Table 9 (continued)

Length of stay stepwise regression with ancillary attributes

respondents (N = 112, adjusted $R^2 = 0.38$, $F = 5.50$, $p_{model} \leq 0.05$).

aB=Regression coefficient. bSE=Standard error. cSB=Standardized regression coefficient. dTol.=Tolerance. et=t statistic. fp=individual variable probability.

country ski trips during the previous season, and Munising spending were significant ($p \leq 0.05$) base model variables. In addition, the constraints variable was nearly significant ($p \leq 0.10$). Mid price lodging, Basic kitchen, child care, laundry, fast food, night club, and, cultural attraction were the ancillary attribute variables which were added to the base model. Mid price lodging, child care, fast food, and cultural attraction importance ratings had negative associations with length of stay. Basic kitchen, laundry, and night club importance ratings had positive associations with length of stay. Trail satisfaction continued to be of more importance than overall community satisfaction, but both variables were insignificant. Trail quality importance again was insignificant. Basic kitchen and laundry would be expected to be important to cross-country skiers planning to stay longer as they would allow lower expenses and the bringing of fewer clothes. There is no single explanation as to why mid price lodging, child care, fast food, and cultural attraction importance ratings would be associated with shorter lengths of stay. Those respondents with children may be more anxious to return home because of obligations such as school associated with children. They may also have less discretionary income. Fast food customers may be less well established in their careers, younger, or perhaps cannot afford to stay as long. Cultural attraction importance may indicate a desire for some meaningful activity other than cross-country skiing. Munising did not offer a clearly identifiable cultural attraction during the season which these data were collected.

The same analysis was then repeated with the amount of trail fee respondents would pay rather than risk closure of the trail as the dependent variable. Price of a trail permit ($3.00 for Forest Service respondents and $0.00

for National Park Service respondents) was added to the analysis. The basic or core model continued to be significant ($p \leq 0.05$) with an adjusted R^2 of 0.134 (Table 10). Price was the only significant ($p \leq 0.05$) variable in the core model. However, overnight cross-country ski trips during the previous season ($p = 0.10$) and the importance of trail quality ($p = 0.12$) were nearly significant.

The inclusion of the ancillary attribute importance ratings in a stepwise regression analysis with the revised trail fee core model resulted in a substantially different model from the length of stay analysis. The model was significant ($p \leq 0.05$) with an adjusted R^2 of 0.336 which indicates that an additional 20.2% of the variance in willingness to pay trail fees was explained (Table 11). Satisfaction with the overall community, past season overnight trips, and price were the only significant ($p \leq 0.05$) base model variables of the nine forced into the analysis. The number of overnight cross-country ski trips during the previous season was the only core variable which was significant in both the length of stay and the trail fee stepwise regression models. However previous season overnight trips had a positive association with length of stay and a negative association with trail fees. Cross-country ski trail quality importance continued to be insignificant.

Overall community satisfaction had a positive association with the willingness to pay trail fees while trail satisfaction was insignificant. Common sense might lead to the expectation that trail satisfaction would have a stronger relationship with trail fees than overall community satisfaction since most people would expect that higher trail satisfaction would be more likely to correspond with a willingness to pay higher trail fees, but such was not the case in this analysis. Perhaps the lack of variation in the relatively

Table 10

Trail fee base model regression

Variable	*B*[a]	SE[b]	S*B*[c]	Tol.[d]	t[e]	*p*[f]
Constant	0.88	2.20	0.00		-0.40	0.69
Distance	0.00	0.00	0.04	0.88	0.38	0.71
Constraints	-0.02	0.01	0.04	0.89	-1.36	0.18
Trail satisfaction	0.01	0.14	0.01	0.92	0.08	0.94
Overall community satisfaction	0.08	0.13	0.06	0.83	0.64	0.53
Trips previous season	-0.09	0.05	-0.16	0.79	-1.67	0.10
Skill level	-0.10	0.20	0.00	0.76	-0.05	0.96
Spending	0.00	0.00	0.03	0.92	0.34	0.74
Trail quality	0.41	0.26	0.14	0.94	1.56	0.12
Price	0.50	0.13	0.35	0.94	3.90	0.00

Note. Analysis with contingent trail fee as the dependent variable included U.S.Forest Service and National Park Service tourist respondents (N = 116, adjusted $R^2 = 0.13$, $F = 2.97$, $p_{model} \leq 0.05$). [a]*B*=Regression coefficient. [b]SE=Standard error. [c]S*B*=Standardized regression coefficient. [d]Tol.=Tolerance. [e]t=t statistic. [f]*p*=individual variable probability.

Table 11

Trail fee stepwise regression with ancillary attributes

Variable	*B*[a]	SE[b]	S*B*[c]	Tol.[d]	t[e]	*p*[f]
Constant	-0.69	2.02	0.00		-0.34	0.73
Distance	0.00	0.00	0.06	0.82	0.73	0.47
Constraints	-0.02	0.02	-0.15	0.73	-1.69	0.09
Trail satisfaction	0.10	0.13	0.06	0.85	0.77	0.44
Community satisfaction	0.27	0.13	0.20	0.69	2.11	0.04
Trips previous season	-0.10	0.05	-0.19	0.75	-2.09	0.04
Skill level	-0.08	0.19	-0.04	0.68	-0.44	0.66
Spending	0.00	0.00	-0.01	0.87	-0.12	0.91
Trail quality	0.33	0.23	0.12	0.93	1.44	0.15
Price	0.52	0.12	0.37	0.88	4.44	0.00
Ski lodge	0.16	0.11	0.14	0.68	1.45	0.15
Waxing room	0.32	0.13	0.26	0.56	2.54	0.01
Laundry	-0.37	0.13	-0.31	0.52	-2.86	0.00
Fast food	-0.14	0.09	-0.14	0.80	-1.58	0.12
Cultural attraction	0.16	0.10	0.17	0.54	1.65	0.10
Arts and crafts shop	0.21	0.10	0.22	0.50	2.04	0.04

Note. Analysis with contingent trail fee as the dependent variable included U.S.Forest Service and National Park Service tourist respondents (N = 111,

(continued on next page)

Table 11 (continued)

Trail fee stepwise regression with ancillary attributes

adjusted $R^2 = 0.34$, $F = 4.70$, $p_{model} \leq 0.05$). [a]*B*=Regression coefficient. [b]SE=Standard error. [c]S*B*=Standardized regression coefficient. [d]Tol.=Tolerance. [e]t=t statistic. [f]*p*=individual variable probability.

high importance ratings given trail quality caused its insignificance in the model. Overall community satisfaction may be an indication of greater income, more spending, and the ability to pay higher trail fees. However, spending in Munising and its association with trail fees was insignificant. Overall community satisfaction may be an indication of brand (Munising) loyalty. Respondents with high community satisfaction perhaps would rather pay a little more in trail fees than go elsewhere for their cross-country skiing just as people who prefer a nationally advertised brand of groceries pay a little more than they would for the store brand. Respondents with high overall community satisfaction may have a special connection to Munising (perhaps relatives or property in the area) which would make switching to another cross-country ski destination community more difficult. The negative association of the number of overnight cross-country ski trips taken during the past season and trail fees may be the result of better knowledge of alternative trails and destinations and the trail fees charged at these alternatives. For example, at many Michigan State Forest cross-country ski trails payment is only requested in the form of a voluntary contribution.

Of the 21 ancillary attribute importance variables in the trail fee step-wise regression, ski lodge, ventilated waxing room, laundry, fast food, cultural attraction, and arts and crafts shop were added to the base model. Ski lodge, waxing room, cultural attraction, and arts and crafts shop importance ratings were associated with higher trail fees while laundry and fast food were associated with lower trail fees. Waxing room, laundry, and arts and crafts shop were of more influence as indicated by their larger standardized coefficients. The ancillary attribute importance ratings which were significant in the trail fee analysis may have been proxies for income.

Those attributes positively associated with trail fees were those which possibly would add to the cost of the visit and therefore could possibly be more important to those with higher incomes. Those attributes negatively associated with trail fees were those which could possibly reduce the cost of the visit and therefore could possibly be more important to those with lower incomes. The manner in which income was measured in the questionnaire precluded its inclusion in the analysis.

To further explore attribute importance rating variable validity, distance zones were examined as a kind of proxy for attribute preferences. Perhaps respondents from certain regions, the Upper Peninsula of Michigan for example, would be different in their importance ratings from other respondents. Respondents were grouped into four distance or proximity zones: those residing up to 99 miles away from Munising, those residing between 100 and 299 miles away from Munising, those residing 300 to 499 miles away from Munising, and those residing at least 500 miles away from Munising. Because of the small number of respondents in the first group (11 respondents) and the last group (15 respondents) a Kruskal-Wallis one-way analysis of variance procedure (SYSTAT 1992) was used to determine if there were any significant differences in the 22 importance ratings among respondents from the various distance zones. Significant differences ($p \leq 0.05$) occurred in the importance ratings of mid price lodging, swimming pool, sauna, and laundry. An analysis of differences in the importance ratings of these four ancillary attributes between the distance zones compared two at a time did not suggest any plausible explanations other than chance for these differences (Table 12).

Table 12

Significant differences between distance zones

Ancillary attribute	1 to 2	1 to 3	1 to 4	2 to 3	2 to 4	3 to 4
Mid price lodging	✔			✔	✔	
Swimming pool	✔	✔				
Sauna		✔				✔
Laundry				✔	✔	✔

Note. Respondents within 99 miles of home were in zone 1. Respondents within 100 to 299 miles of home were in zone 2. Respondents within 300 to 499 miles of home were in zone 3. Respondents more than 499 miles away from home were in zone 4. ✔ indicates importance ratings differed significantly between the two groups ($p \leq 0.05$) as determined by Kruskal-Wallis analysis of variance (SYSTAT 1992).

CHAPTER V: SUMMARY AND CONCLUSIONS

This study examined the importance of ancillary attributes to cross-country skiers visiting a small, rural, northern Michigan community. Ancillary attributes are those attributes which are secondary to the main purpose of the trip but facilitate the main trip activity, hotel accommodations or fast food restaurants for example in the case of cross-country skiing. Respondents rated the importance of 21 ancillary attributes and the importance of quality ski trails on a 1 (not important) to 7 (very important) scale. Previous studies of outdoor recreation activities, and specifically cross-country skiing, have examined the importance of attributes of the outdoor recreation site, usually a wild land setting. A few studies of demand for down hill skiing have incorporated resort characteristics and one study (Brayley 1991) compared resort characteristics important to cross-country skiers to those important to snowmobilers. Other studies which have examined the importance of attributes have done so for a specific or several specific tourism destinations in general and not for a specific outdoor recreation activity. Studies of specific outdoor recreation activities have focused on attributes to be found at the outdoor recreation site and have ignored the role of supporting facilities and services, such as lodging establishments, restaurants, entertainment establishments, and shopping establishments, in augmenting outdoor recreational experiences (Lime 1971; Lucas 1980; Allton and Lieber 1983; Peterson, Dwyer, Darragh 1983; Lucas

1985; Watson, Williams, Roggenbuck, and Daigle 1992; Love and Watson 1992; Roggenbuck, Williams, and Watson 1993).

The results of this study indicate that importance ratings of some ancillary attributes may be useful in comparing various groups of cross-country skiers and in explaining variations in length of stay. Ancillary attribute importance ratings were higher for those variables that were available at the destination community, fulfilled basic shelter and sustenance needs, or were strongly connected with the main purpose of the recreational trip. These results indicate that cross-country skiers base their destination selection at least in part on the presence of key ancillary attributes. The results of this study tend to support each of the three hypotheses presented in chapter III.

Only nine of the 21 ancillary attributes measured were found to be significant in either length of stay or willingness to pay models. Evidence of the synergetic relationship between the natural, wild land, recreation setting of cross-country skiing and the support services provided by destination communities would have been strengthened if additional ancillary importance ratings had made significant contributions in the models. Several ancillary attributes were added to both the length of stay model and the trail fee model in stepwise regression procedures, but none were significant ($p \leq 0.05$) across both models. Mid price lodging, basic kitchen, child care, fast food, night club, and cultural attraction were significant in the length of stay regression model, while ventilated waxing room, laundry, and arts and crafts shop were significant in the trail fee regression model. Laundry was a part of the length of stay model but was not significant, and ski lodge, fast food, and

cultural attraction were part of the trail fee model but did not have a significant p value.

Attribute importance, in the trail fee model, may have served as a substitute for a measure of income. Those ancillary attributes with a positive influence on willingness to pay trail fees were those that probably would be available at higher prices (ski lodge, ventilated waxing room, cultural attraction, and arts and crafts shop). This may indicate the Munising cross-country ski market could be divided into budget and luxury segments.

Overall community satisfaction had a significant positive association with trail fees. This indicates that those who reported greater overall satisfaction with the community were willing to pay higher trail fees. However, satisfaction with trails did not have a significant effect on the willingness to pay trail fees even though cross-country ski trails would appear to have a more direct link with the main activity of the trip, cross-country skiing. Perhaps those skiers who report greater overall community satisfaction have developed a degree of brand loyalty and are willing to pay more to keep skiing in the Munising area or perhaps they have stronger connections to the Munising area either through the ownership of property or the presence of relatives or friends. Lack of variation in the trail satisfaction variable may be the reason for its lack of association with trail fees. Nearly all respondents rated satisfaction with trails highly.

The number of overnight trips taken during the previous cross-country ski season had a negative association with willingness to pay trail fees. Perhaps these skiers have a greater knowledge of alternative ski destinations where trail fees are lower or nonexistent. At many Michigan State Forest cross-country ski trails, for example, payment is voluntary. The data for this

study were collected during a winter when snow was not plentiful in lower Michigan and farther to the south. During winters with plentiful snow to the south of Munising, price sensitivity towards both trail fee and travel cost may cause some cross-country skiers, especially those who have traveled over night to a number of different locations, to use substitute cross-country ski destinations which have lower costs. Munising's major competitive advantage, identified by local U.S. Forest Service personnel, is that the Munising area frequently has abundant snow when competing locations to the south have none or little. During winters when snowfall is plentiful in more southern locations, Munising's major competitive advantage may disappear for large portions of the cross-country ski season, making less-expensive substitute destinations more attractive.

A relatively large amount of variance in willingness to pay trail use fees and in length of stay remained unexplained by the models used in the current study. This may reflect the reluctance of many individuals to pay any fees for whatever purpose to a government agency which they have already supported through taxes. Some other wording of this question which would more clearly identify the benefits which would be obtained with fee payment and would identify some organization other than a government agency as the recipient of the money would perhaps be an improvement. However, an additional three of four dollars per person per day may not be a large enough expense, when compared to the several hundred dollars being spent in total on a cross-country ski excursion, to be of concern to most respondents. Personal income and time may also have been very limiting, both in the time spent in Munising and the amounts respondents would be willing to pay for trail fees. The addition of these two variables perhaps would account for a

greater portion of the variance in both models. However, both time and income were at least partially accounted for by the distance from home variable and also as a portion of the constraints variable. Constraints were nearly significant in both models and distance was a significant variable in the length of stay model, but not in the trail fee model.

Although most studies of recreation demand use the number of trips individuals make to the recreation site as the dependent variable, this study, as did Bell and Leeworthy (1990) and Silberman (1985) among others, used length of stay as the dependent variable. The focus of Bell and Leeworthy's (1990) study was beach attendance. They did not include ancillary attributes in their demand model except to include on site spending as a constraint. Silberman included some attributes which could be considered ancillary in a measure of image, but his study was of tourism in general to a specific destination and not of a specific outdoor recreation activity. The current study examined a specific outdoor recreation activity and the contribution that certain ancillary attribute importance ratings can make in explaining the variance in length of stay. Somewhat contrary to what could be considered common wisdom among natural resource managers, trail quality importance and trail satisfaction had little effect on length of stay or willingness to pay trail fees. Several ancillary attribute importance rating variables were significant in one or the other of the models and overall community satisfaction was significant in the trail fee model.

Significance differences in two ancillary attribute important ratings, bar and night club, occurred between U.S. Forest Service and National Park Service respondents. Also, there was a significant difference in the importance rating of quality of ski trails. All of these attributes were rated

significantly higher in importance by U.S. Forest Service respondents. U.S. Forest Service skiers may be more interested in such social opportunities as interacting with family and friends afforded by cross-country skiing than National Park Service respondents. Perhaps National Park service respondents would be more interested in opportunities to observe scenery and nature. However, such issues could not be adequately examined with the data available. U.S. Forest Service respondents may have accorded more importance to the quality of the cross-country ski trail because of the trail fee charged at U.S. Forest Service trails.

In accordance with need theories of motivation, those ancillary attributes considered more important than average were those directly related to cross-country skiing, which was the main trip activity for all but a handful of the respondents, and the basic needs of sustenance and shelter. One exception to the above generalization was the relative importance of sauna for some for local skiers. Taking a sauna at first glance appears to be unrelated to either a basic need or the cross-country ski experience. However, for some groups of cross-country skiers, saunas may be closely linked with cross-country skiing activity. Some skiers may consider a sauna after a cross-country ski run as a key part of the cross-country ski experience. The sauna may be likened to a rich desert after the main meal of several hours of cross-country skiing.

The results of this study indicate that cross-country skiers view the quality of cross-country ski trails as the most important attribute in choosing a destination community. However, trail quality importance ratings were not a significant variable in explaining variance in length of stay in Munising or in

explaining variance in willingness to pay trail fees. Other ancillary attributes had a greater impact on both of these demand related variables.

The cross-country skier must decide if the potential destination has the type of trails desired. While the current study did not examine how cross-country skiers may define trail quality, other studies have determined the qualities that cross-country skiers value in a cross-country ski trail (Nelson 1988; Smith 1980; Rosenthal, Driver, and Rauhauser 1980; McLaughlin and Paradice 1980). If a community receives adequate snowfall, quality cross-country ski trails may be relatively easy to provide. If several competing destinations have trails with the desired qualities, ancillary attributes may prove to be the deciding factors on which a destination community is chosen.

Cross-country skiing is not an activity the recreationist chooses lightly. Some expense is involved in obtaining the necessary equipment, usually a minimum of $100.00. Additional expenses of money and time are necessary to travel to a destination community and stay at least a couple of days. The cross-country skier usually doesn't arrive at a destination such as Munising, spend the night, and then decide to go for a ski. Cross-country skiers, as indicated by this study, usually arrive with their equipment in hand with cross-country skiing in mind as the main activity of the trip. Travelers during other seasons may be touring for a variety of reasons, choosing activities as the mood strikes, or as they are motivated to do so by advertising or sights and sounds along the way (Atkinson and Raynor 1974). Many summer travelers may not even have a specific destination in mind, but just head up north, back east, out west, or down south. Nearly all of the respondents contacted at Munising listed cross-country skiing as the primary purpose of the trip. Given the central importance of skiing to the entire journey for nearly all the

respondents, it is highly likely that the first test of a destination is the availability of quality trails. Quality to a cross-country skier may mean that the trail is groomed and passes through scenic terrain with a number of hills. Once the availability of that attribute has been established, the skier probably looks for suitable supporting ancillary attributes.

Logic, and much of the recreation economics literature would indicate that on-site costs, often related to ancillary attributes, would have a negative effect on length of stay, but the results in the present study indicate that higher spending results in longer stays. Perhaps the inclusion of income and time costs in the model would change this result. According to Bockstael, McConnell and Strand (1991), the omission of time opportunity cost should increase the absolute value of money costs. The inclusion of income and a time value variable would perhaps cause on site spending to have a negative effect on length of stay, or at least lessen its positive effect.

Ancillary attributes in economic studies are usually represented only as a composite on site price, or in the hedonic travel cost model, as a specific, objective, physical quantity measure which is then valued according to how much further tourists travel to reach a destination with a specific set of attributes. However, the present study has demonstrated that ancillary attribute importance measures can be valuable additions in models examining demand variation. Outdoor recreation sites provided by the government are calculated to have a consumer's surplus, a value beyond what the consumer pays to obtain the use of that site. Presently, when recreation sites are valued using travel cost models or contingent valuation studies, all of the consumer's surplus is taken as the value of the recreation site. However, it seems, given the results of the current study, that at least

some ancillary or support services provided by private business establishments are used by the recreationist in the production of the recreation experience. Thus, attributing the entire consumer's surplus associated with a visit to a public recreation area will result in an over estimate of the value of the recreation area. The association of increased spending in the community with longer stays and higher overall community satisfaction with higher trail fees would seem to indicate, at least in the case of cross-country skiing, that a portion of the recreation value of a public recreation site is derived from nearby supporting services provided by the private sector. The private sector in turn benefits from additional customers which are drawn to the community specifically by the public sector recreation developments. Both types of organizations benefit from goods and services provided by the other. Ultimately it is the customer who has a better recreation experience and receives a better return on the recreation investment of time, money, and equipment because of joint efforts by public and private sectors.

Government provided attributes (packaged in the form of recreation sites) can be thought of as inputs to the production of recreation experiences by the household (Cicchetti, Fisher and Smith 1976; Walsh 1986; Deyak and Smith 1978). These experiences tend to be valued more highly than the costs of obtaining the government provided inputs. Hence the inputs are said to have consumer's surplus. Ancillary attributes such as hotels and restaurants, have traditionally been valued only at their market price in recreation demand studies. Theses costs are then treated as constraints or are added into the travel cost variable in the model. However, they can also be thought of as

inputs to creating the recreation experience which results in consumer's surplus.

If ancillary attributes help to create the recreation experience which results in consumer's surplus, then some of the consumer's surplus traditionally used to value the government provided outdoor recreation site should be credited to the private sector ancillary attributes. The purchase of hotel nights, restaurant meals, travel, and access to the recreation site all serve as inputs to the production of a recreation experience.

As suggested by Fletcher, Adamowicz, and Graham-Tomasi (1990), if utility is generated by staying in a hotel, then only the minimum lodging price should be counted as travel cost. Only by spending time at the destination collecting (consuming) both private sector and government sector inputs (Mak and Moncur 1980; Rugg 1973) can the consumer create a recreation experience. If the hotel is not separable from the trip product and part of the trip enjoyment comes from eating out, staying in motels, and shopping, then the attributes providing these services should be included in the demand system used to evaluate an outdoor recreation site (Fletcher, Adamowicz, and Graham-Tomasi 1990). If ancillary attributes are important in creating recreation experiences, then planning concepts such as the recreation opportunity spectrum could perhaps be expanded to include secondary service facilities.

Different recreation activities and different participation styles could be expected to depend on different combinations of ancillary attribute inputs which would have different contributions to consumer's surplus. Willingness to pay is not only a measure of the value of the outdoor recreation site but is also a measure of the value of all inputs to outdoor recreation experience

production. As Getz (1993) indicates, "Retail surveys are . . . needed to test tourist preferences for types of goods and services. . . ."

Without some measure of what the visitor perceives as the important qualities of the outdoor recreation site and supporting destination community, to determine exactly what the visitor values in a particular destination is difficult. Even when the trip is a single purpose, single destination event, to ascribe all the consumer's surplus to the outdoor recreation site ignores the contributions of other inputs which are often found in supporting destination communities.

To determine the importance of ancillary and primary attributes, customers need to be asked what attributes are of importance. Observation of behavior or experimental choice situations can then be used to confirm the importance level of specific attributes. Such observation may reveal that some respondents may be unaware of some of the attributes which influence their decision. Respondents may also ascribe too much or too little importance to other attributes. Variations in willingness to pay to experience various combinations of ancillary and primary attributes could be used to determine the values of the individual attributes in creating recreation experiences.

Applications

This research has identified several ancillary attributes which were rated by skiers as being more important in selecting a cross-country ski destination and which were related to longer length of stay in the Munising, Michigan area. Additional attributes were identified which were related to a willingness to pay higher trail fees. Knowing which attributes are of

importance to cross-country skiers will allow more effective marketing campaigns aimed at changing beliefs about these attributes, changing the relative importance of attributes, adding new important attributes at destinations currently lacking them, and changing beliefs about the "ideal" cross-country ski destination (Hawkins, Best, and Coney 1992).

Community Applications

Munising, as well as other communities with characteristics similar to those of Munising, could find the results of this research useful. Organizations and businesses in the Munising area could emphasize in their promotional efforts those attributes present in Munising which were rated as being more important in choosing a cross-country ski destination.

Given the much higher average rating of trail quality importance and the detail with which this attribute was described by the mail questionnaire respondents in the open-ended questions, any promotional efforts should emphasize the availability and quality of a number of superior cross-country ski trails in the vicinity of the community and the special features of these trails. However, promotion is only one portion of any tourism program. Additional effort perhaps could be made to further develop the cross-country ski tourism product in Munising. The cross-country ski tourism product consists of trails, lodging establishments, restaurants, shops, emergency services, infrastructure and other services and products which tourists use (Gunn 1994). Sometimes the cross-country ski product is thought only to be provision of the groomed trail. However, this research indicates ancillary attributes are a vital part of the product. Some importance ratings for ancillary attributes were associated with longer stays, others with higher

trail fees. Promotion of trail quality is necessary to interest customers in coming to Munising. Quality ancillary attributes are then necessary in order to maintain and increase the customer base. Providing key ancillary attributes is necessary to assure return visits and longer stays. Neither is sufficient by itself to assure continued success.

Product development would involve providing additional services and individual products that cross-country skiers would find useful or enjoyable. For example Munising restaurants, as restaurants have in other regions, could add additional so-called "healthy" menu items to their menus. Lodging establishments could set aside certain floors or sets of rooms especially for cross-country skiers or others who desire quiet stays as opposed to other groups of winter sports enthusiasts who may prefer or generate more noise. Special events could be organized, especially during usually less crowded periods. The U.S. Forest Service in cooperation with local businesses and other organizations organized during the 1992-1993 and the 1993-1994 ski seasons an event in which hors d'oeuvres were served at several stations along one of the cross-country ski trails followed by a banquet for all participants. Such product development may be especially valuable during seasons when snow is plentiful and Munising is faced with many potential competing destinations. The results indicate that experienced cross-country ski tourists may be especially price sensitive. During winters with good snow cover to the south, Munising perhaps should consider lower trail fees, making trail fee payment voluntary, increased promotion, and special packages and events to continue to draw cross-country skiers who might otherwise stop at destinations closer to home.

However, in order to know what products to develop, a customer information system must be developed to determine what products and services customers and potential customers desire. Information can be developed from surveys, focus groups, test marketing new ideas, or informal conversations with visitors (Covey 1990). Important insights could be gained by using each method. Tastes change. Only through systematic, diligent effort can customer changes be identified, acted upon and new products developed. One trail in the Munising area could be selected at which to sample weekend cross-country ski visitors with a short questionnaire to gage how well the community and the cross-country ski trails are meeting the needs of the skiers. Through the collection of information over several seasons, marketing efforts could be fine-tuned to appeal to the types of cross-country skiers most likely to visit Munising. Changes in the ages, life stages, and incomes of skiers could be identified and necessary changes in product planned. Results of the regression analysis reported above indicate that providing more high end services, such as those found in ski lodges, may attract higher spending cross-country skiers while providing basic kitchens and entertainment may encourage cross-country skiers to stay longer.

Through emphasizing quality cross-country ski trails in promotional efforts and assisting resource management in providing high quality trails, business from cross-country skiers could for a time increase. Providing desired quality ancillary services while maintaining quality cross-country ski trails would encourage a long term increase in business. The cross-country ski trails in the Munising area give the local business organizations a concise, concrete product to promote. The provision of additional services which

exceed customer expectations provide the foundation for long term business growth.

Resource Management Applications

The results of this research indicate that the provision of quality cross-country ski trails is highly important. National Park Service and the U.S. Forest Service currently provide the land for the trails in the area and organize resources to see that they are groomed on a regular basis during the cross-country ski season. Without these efforts, cross-country skiers would probably not come to Munising in any appreciable numbers. In addition, the U.S. Forest Service has taken the lead in efforts to organize the community to more effectively promote and provide for cross-country skiing. The results of this research underscore the importance of these efforts. Without the provision of key ancillary attributes by the community at large, efforts to promote cross-country skiing by the National Park Service and U.S. Forest Service through the provision of groomed trails would only reach those skiers who live nearby. If only skiers from the local area were to use the cross-country ski trails, the value of the trails would be greatly reduced, possibly to the point that there would be no justification for keeping them open. Cross-country ski trails in the proximity of a destination community, at least in the case of Munising, result in more business and greater value for businesses located in the local area.

Although this research did not closely examine the attributes of a quality cross-country ski trail, this research does emphasize the importance of providing quality trails in attracting cross-country ski tourists to the local community. To detect changes in what quality means in cross-country skiing,

the U.S. Forest Service could assist the community in instigating a customer information system. Cross-country skiers are most easily contacted at the trails. A suggestion box could provide valuable insights to the kinds of trail features desired by skiers and also the kinds of community attributes cross-country skiers would like to have available. More sophisticated means of information collection could confirm these insights or detect other trends. This research indicates that while quality trails are important in attracting skiers, the characteristics of the destination community influence length of stay and spending. Resource managers could emphasize the importance of trails in attracting customers in efforts to increase community support for and cooperation in cross-country ski trail management.

The results of this research indicated that there is a synergistic relationship between resource management agencies and local communities providing tourist services. Thus, there is a need for resource management agencies and local communities to work together to provide satisfying cross-country ski experiences.

Future Research

Additional research is needed to clarify the importance of ancillary attributes to visitors who engage in specific, specialized recreation activities. Ancillary attributes can and do influence demand for wild land recreation facilities and wild land recreation facilities influence demand for lodging, restaurant, entertainment, and shopping establishments. However, there is currently little explicit recognition of this in the recreation, recreation economics, or tourism literature.

Additional research is needed to more closely identify variations in ancillary attribute importance and the relationship of ancillary attributes to recreation experiences in wild land settings. Specifically, the relationship among rural recreation site attributes and management practices, recreation motivations, and support community characteristics needs further exploration. The results of the current study indicate that ancillary attributes found in support communities are an important part of the recreation product. Through the combination of key ancillary attributes, destination products can be designed to serve selected segments of the cross-country ski market. Packages may be developed to specifically serve high spending, low spending, long stay, or short stay markets or markets with various combinations of these characteristics. Motivations of cross-country skiers may be reflected in desired characteristics of the ski trail and in the desired support services. Skiers primarily motivated by fitness may desire trail features which provide a strenuous workout with nearby support services which include athletic training facilities. Skiers primarily motivated by socializing may enjoy warming huts along the trail complete with refreshments and communities with a variety of bars, night clubs, and family entertainment. Skiers motivated by the opportunity to observe nature may enjoy interpretive signs along the trail and naturalist talks at night.

Future research could be improved by including additional variables and measures. As noted above, the inclusion of motivational variables in future research would allow closer linking of ancillary and primary attributes. Direct measures of primary attributes identified as important by respondent groups would allow the identification of the ways in which primary attributes offered in the trail setting differ according to managing

agency. The current study only measured differences in primary attributes indirectly through the identification of the agency managing the trail where respondents were contacted. Inclusion of income, time, and substitute destination measures would allow further exploration of how ancillary and primary attributes influence demand for specific outdoor recreation activity facilities and their supporting communities. Documentation of income and time effects in the demand models for such destination communities should be undertaken to isolate the effects of ancillary attributes in generating demand.

However, McConnell (1985,) and Bockstael, McConnell, and Strand (1991) note that in many site demand functions, the income effect is insignificant because higher incomes lead to the visitation of other sites and lower incomes preclude visitation at all. Income may be more associated with participation and non participation than the number of trips, or perhaps in the case of the present study, length of stay (Bockstael, McConnell and Strand 1991). This issue has not been addressed for cross-country skiing in a small town destination community.

Additional research could compare slightly different combinations of ancillary attributes present in nearby, similar communities. A study of the variation in customer characteristics among these communities could explore whether or not small communities providing recreation experiences can be substituted one for the other. If customers of each community have similar motivations and socio-demographic characteristics, then the products and experiences offered in and around the communities could be considered substitutable. These communities together, as a group, may be thought of as a single destination by their customers (Fridgen 1987). If small communities are

substitutable for one another, then a substitutability variable could be included in valuation models for nearby wild land recreation facilities.

The findings of the current study could serve as the basis for additional investigations. Ancillary attributes found to be of importance could be combined into several differing descriptions of hypothetical destination communities. Respondents would be asked to chose or rate these descriptions according to their preference for visiting each hypothetical community (Louviere and Timmermans 1990). Statistical analysis could then determine the importance of each attribute in a number of selection decisions. This approach would allow a more controlled manipulation of the attributes and a comparison of product types without the respondent having had to visit a number of actual destinations.

Many cross-country skiers who came to Munising during the winter of 1991-92 considered this destination an undiscovered gem (comments written on questionnaire). Marketing efforts may change Munising from a destination which provides a sense of discovery to a destination that seems crowded to some cross-country skiers. Several skiers commented that in past seasons they skied at several Wisconsin destinations but now prefer to come to Munising to escape crowds or to escape increasing commercialization. A study of the attributes currently available in the Munising area offers an opportunity to document possible changes in visitor characteristics as Munising becomes a more widely known destination. Changes in visitor characteristics may occur as attributes change. The addition of a ski loge or an upscale hotel could bring substantially different visitors to the Munising area. A change in visitor characteristics coupled with a change in community attributes would give additional credence to the idea that ancillary attributes are important. A

comparison of Munising visitors to cross-country ski resort customers may forecast how customers characteristics may change should such an establishment locate in the Munising area.

Munising skiers must travel varying distances to arrive at their destination. Usually in travel cost demand studies, all travelers are examined in the same model. Recent economic literature has discussed and implemented the separation of local participants from tourists in the development of demand models because these two groups face inherently different decisions about recreation participation. The key determinant is whether the visitor spends the night away from home. This measure is sometimes coupled with a standard travel distance of 100 miles. Additional analysis could examine at what distance local skiers begin to behave more like tourists in their preference for or use of ancillary attributes. Perhaps tourist cross-country skiers could be further separated into middle distance and long distance travelers. Scott, Schewe, and Frederick (1978) in a study of tourists to Massachusetts provided some evidence that travelers consider different attributes in their travel decisions according to the distance their destination is from their home. Of more practical importance is whether or not differences in attribute importance warrant the development of separate models for travelers of different distances. The identification of the break points for distance groups could provide a relatively untapped means of market segmentation and a means of targeting promotion and advertising activities. Analysis examining relationships between distance zones and ancillary attribute importance ratings using the Munising data suggested such relationships may exist. As indicated in Table 12, ratings for mid price lodging, swimming pool, sauna, and laundry, appear to differ across distance

zones. Mid price lodging, swimming pool, and sauna appear to be rated higher in importance by visitors from within 100 miles and visitors from more than 500 miles away. Laundry is more important to travelers from greater than 500 miles away. Analysis of a larger data set with more respondents from both shorter and longer distances may be necessary to explore this issue further.

Destination decisions may be made based on any number of criteria from trail quality to visiting someplace new. These criteria may change depending on the home locale, the distance traveled, previous skiing experience, and the needs of the travel group in general. Specific reasons for choosing specific destinations need to be recorded, perhaps by the subjects themselves, at the time decisions are made. In depth interviews (Henderson 1991) would perhaps reveal different reasons for visiting different sites for those skiers who travel to a variety of destinations during the cross-country ski season. Cross-country skiers may not be entirely mindful of the reasons a destination is selected and may later justify their destination selection to reflect those reasons which have come to be accepted in their social group or appear on a standardized questionnaire.

Information about the temporal aspects of decision making would also be helpful. Trip decisions for a given period (a ski season for example) may be made separately, on a trip by trip basis, or almost simultaneously with the total number of trips for a given period (season) decided upon before the season begins. If the latter case is true, then the probability of taking a particular trip would be highly connected to the other trips. Constraints upon trip length would not only involve the cost of one trip, but all the trips

planned for the given season. The time period for which the number of trips is decided may be a week, a month, or several months.

Parallel to the issue of whether trip decisions are dependent on each other is the question of whether decisions about trip and trip length are made together or at different times. Even if the trip length is decided upon at the same time as the number of trips, the trip length decision can be modified if conditions do not match expectations as in the case of rain and campers, anglers who are not having much luck, and skiers who do not find good snow. Modifications of trip length may also have an effect (increasing or decreasing the number or increasing or decreasing the length) on the remaining, as yet untaken, trips, assuming trip decisions for a period occur at the same time. If trip decisions are made on a relatively separate trip by trip basis, modification of one trip length may still have such effects. A traveler may think that conditions were so bad they will never return, or, conversely, a traveler may decide to return sooner to take advantage of better weather conditions.

Future studies should include measures of motivation. Motivation measures would have been useful in this study to further explore hypothetical differences in sociability between U.S. Forest Service and National Park Service respondents. Motivation may influence the kinds of ancillary attributes important to particular groups of skiers and the manner in which available attributes are interpreted in the mind of the skier. Measures of beliefs about quantities of attributes available would help with problems caused by different interpretations of the way ancillary attributes are described and provide a sounder basis for comparing visitor groups and different destination communities. For example, skiers may differ in how

they define, low, mid, and high levels of lodging. One respondent may consider a motel as a mid-range establishment while another respondent may consider the same establishment to be low price.

Summary

High quality cross-country ski trails are numerous in the Upper Midwest. It has been the contention of this study that because high quality trails are numerous, destination communities wishing to attract cross-country skiers can do so by providing key ancillary attributes. Cross-country skiers visiting Munising, Michigan rated the importance of ancillary attributes in choosing a destination. Cross-country skiers tended to rate attributes associated with shelter, food, and the main trip activity more highly than other attributes. Cross-country skiers also differed in their importance ratings of some attributes according to the agency which managed the trail where they obtained their questionnaire. Importance ratings for some ancillary attributes were significant in explaining the variance in the number of days spent in Munising. The importance ratings for some other ancillary attributes were significant in a regression analysis of willingness to pay trail fees. Trail quality importance and trail satisfaction were not significantly related to either length of stay or willingness to pay trail fees. But overall community satisfaction was significant in a regression model examining willingness to pay trail fees.

Future research should include measures of income and time as constraints and a measure of substitute sites. Measures of motivation would also be valuable in assessing the strengths of ancillary attribute preferences. Similar and dissimilar cities and their visitors could be compared with each

other to further analyze the role of ancillary attributes in destination selection. Measures of attribute quantity and quality from the point of view of the cross-country skier would be of value in analyzing the importance of ancillary attributes.

Demand for cross-country skiing at a specific location is at least partially dependent on the presence of key ancillary facilities, as well as on trail quality. The results of the current study indicate that the presence of certain community attributes, which appear to be secondary or ancillary in importance, can add to or subtract from the duration of visits and can attract visitors willing to pay higher or lower trail use fees. Ancillary attributes may be more important in examining length of stay and willingness to pay trail fees than trail quality. High quality trails are the most important attribute a cross-country ski destination can offer, but secondary attributes may substantially affect the overall volume of business. A portion of the valuation, consumer's surplus, usually credited to public recreation sites perhaps results from key ancillary attributes of nearby supporting communities. A portion of the consumer's surplus which has previously been counted as a portion of the value of a publicly provided recreation site perhaps should be counted as value contributed by services provided by destination communities located near public recreation sites. Through joint efforts, public and commercial organizations appear to be able to offer a product superior to that which would be available from single sector endeavors.

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APPENDIX: QUESTIONNAIRES

Dear Skier:

In an effort to better manage cross-country ski trails in the Munising area, the U.S. Forest Service, in cooperation with the Travel, Tourism, and Recreation Resource Center at Michigan State University (TTRRC), is asking a select sample of skiers to complete this questionnaire. Your answers to the questions will be kept confidential and will only be reported in total along with other respondents to the survey. When you have completed the questionnaire, please either mail it to us using the postage paid envelope or drop it off at the U. S. Forest Service office, 400 E. Munising Street, Munising.

The U.S. Forest Service will use the results to better provide quality winter recreation opportunities. Your cooperation is vital to the success of this project as only a limited number of people can be contacted for their opinions. Please take a few minutes sometime today to complete this questionnaire and return it.

Sincerely,

Richard A. Anderson

Dick Anderson, U.S.F.S.

Peter Forsberg, T.T.R.R.C.

Please check the trail at which this questionnaire was handed out: ❑ Hiawatha ❑Valley Spur ❑ Christmas ❑ McKeever Hills ❑ Buckhorn

1. Please check the type of pass which you purchased. ❑one day ❑annual ❑none

2. Please circle the amount you paid for this pass.
   $0 $3.00 $5.00 $10.00 $20.00 $30.00 $35.00 $50.00
   What was the date the pass was purchased?_____

3. The U.S. Forest Service operates five cross-country ski trails in the Munising area. Because of high maintenance costs and lack of use, the Forest Service in the future may have to cut back. Please check the option below you would prefer.

   ❑ Closing trails ❑ Reducing grooming quality ❑ Raising fees ❑ Stop Grooming

4. The U.S. Forest Service is considering closing some trails because of lack of use and the high costs of trail maintenance. One means of offsetting the costs of maintaining trails would be to charge higher fees. How much would you be willing to pay? If the amount is not high enough, the Forest Service would likely close this and the other trails it operates. *What is the highest total fee you would pay* ***per person*** *for a day of skiing at* ***this trail*** *in order to keep using* ***this trail*** *at its current level of grooming? Circle the dollar amount below that you would pay to keep using* ***this trail****.*

   $0.00 $1.00 $3.00 $4.00 $5.00 $6.00 $7.00 $8.00 $9.00 $10.00 $11.00 $12.00 $13.00

5. What is the highest total fee you would be willing to pay **per person** per day to use **this trail** for a day of skiing if it were **un-groomed?**

   $0.00 $1.00 $3.00 $4.00 $5.00 $6.00 $7.00 $8.00 $9.00 $10.00 $11.00 $12.00 $13.00

6. Would you continue to use Forest Service trails if they were no longer groomed and there were no fees? (check one) ❑Yes ❑No

7. If the Forest Service decided to close some of its cross-country ski trails, which **one** trail should be kept open.

❑Hiawatha ❑Valley Spur ❑Christmas ❑McKeever Hills ❑Buckhorn

8. The U.S. Forest Service would like to attract more cross-country skiers to the Munising area. For each set of possible actions, check the one in each set which you feel is the most attractive. (One X per line)

a. _____Add more trails _____Add more loops to current trails _____Add more skating loops

b. _____Offer special ski packages _____Sponsor cross-country ski festival _____Offer ski lessons

c. _____ Add lodge to lodge trail _____Develop a ski lodge _____Provide direct access to trail from lodging

d. _____Provide warming huts _____Provide rest shelters along trails _____Provide outhouses along trail

e. _____Provide trails which require more skill _____Provide easier trails _____ Groom loops for skating

f. _____Increase signs on trails _____Increase signs on highway _____Increase promotion and advertising

g. _____Increase trail variety _____Provide better quality grooming _____Provide side by side grooming

9. Which letter from above is the most attractive action?_____

10. There are many reasons people do not ski as often as they would like to. If you strongly agree with one of the reasons below which may reduce the number of times people cross-country ski **in the Munising area**, check the blank closest to agree. If you strongly disagree mark the blank closest to disagree. If you feel somewhere in between, mark the blank between agree and disagree which most closely reflects how you feel about the reason. If you neither agree nor disagree, mark the middle blank.

It takes too much time to travel to Munising	disagree	___	___	___	___	___	___	___ agree
Concern about snow on the roads	disagree	___	___	___	___	___	___	___ agree
Concern about being unable to return home on time because of snow	disagree	___	___	___	___	___	___	___ agree
Fees charged at Forest Service ski areas are too expensive	disagree	___	___	___	___	___	___	___ agree
Munising is too expensive	disagree	___	___	___	___	___	___	___ agree
Obligations at home or work	disagree	___	___	___	___	___	___	___ agree
Members of family or group would rather go elsewhere	disagree	___	___	___	___	___	___	___ agree
Parking lots are not plowed	disagree	___	___	___	___	___	___	___ agree
Concern about medical care	disagree	___	___	___	___	___	___	___ agree
Concern about vehicle burglary	disagree	___	___	___	___	___	___	___ agree
I don't feel welcome in the community	disagree	___	___	___	___	___	___	___ agree
Lack of companions	disagree	___	___	___	___	___	___	___ agree
Concern about becoming lost	disagree	___	___	___	___	___	___	___ agree
Poor personal physical condition	disagree	___	___	___	___	___	___	___ agree
Too many snowmobiles around Munising	disagree	___	___	___	___	___	___	___ agree
Not enough to do in Munising	disagree	___	___	___	___	___	___	___ agree
Lack of ski rental	disagree	___	___	___	___	___	___	___ agree

11. Check each of the five U.S. Forest Service cross-country ski trails in the Munising area that you skied before November 1991.

❑Hiawatha ❑Valley Spur ❑Christmas ❑McKeever Hills ❑Buckhorn

12. How many times did you cross-country ski last season (November 1990 through March 1991)? _____

13. How many overnight trips during which you cross-country skied did you make during the past season (November 1990 through March 1991)? _____

14. How many trips do you expect to make to cross-country ski in the Munising area this season (November 1991 through March 1992)? _____

15. Other than Munising, what one community would you visit to cross-country ski? Check none if applicable.

_____ ❑ None

16. Please circle your skill level: 1=beginner, 5=expert

beginner		intermediate		expert
1	2	3	4	5

17. What newspaper do you read most frequently? _____

18. Will you spend the night away from home while on this trip? ❑No ❑Yes

19. In the Munising area, where are you staying?

❑your second home ❑your own home ❑friend's home or friend's second home

❑relative's home or relative's second home ❑ motel/hotel

20. Is the place you are staying within 15 miles of Munising? ❑No ❑Yes

21. What is the main reason you are in the Munising area?

❑live here ❑visiting friends or relatives ❑recreation ❑business ❑Other _____

22. Please circle each winter recreation activity in which you participate.

snowmobiling	ice fishing	ice climbing	camping	hunting	ice skating
sledding	downhill skiing	snowshoeing	cross-country skiing		Other_____

23. Please circle the **main** activity in which you will participate **on this trip**.

snowmobiling	ice fishing	ice climbing	camping	hunting	ice skating
sledding	downhill skiing	snowshoeing	cross-country skiing		Other_____

24. How **Important** are the **availability** of the following features to you **when choosing** a cross-country skiing destination community? Place a check mark in the blank which reflects how you feel.

Low price motel	Not important	___	___	___	___	___	___	___ Extremely important
Mid-price motel	Not important	___	___	___	___	___	___	___ Extremely important
Ski lodge or ski resort	Not important	___	___	___	___	___	___	___ Extremely important
Basic kitchen (sink and microwave)	Not important	___	___	___	___	___	___	___ Extremely important
Child care	Not important	___	___	___	___	___	___	___ Extremely important
Swimming pool	Not important	___	___	___	___	___	___	___ Extremely important
Sauna	Not important	___	___	___	___	___	___	___ Extremely important
Ventilated waxing room	Not important	___	___	___	___	___	___	___ Extremely important
Laundry	Not important	___	___	___	___	___	___	___ Extremely important
Fast food	Not important	___	___	___	___	___	___	___ Extremely important
Family restaurant	Not important	___	___	___	___	___	___	___ Extremely important
Gourmet restaurant	Not important	___	___	___	___	___	___	___ Extremely important
Night Club	Not important	___	___	___	___	___	___	___ Extremely important
Family oriented entertainment	Not important	___	___	___	___	___	___	___ Extremely important
Cultural attraction	Not important	___	___	___	___	___	___	___ Extremely important
Bar	Not important	___	___	___	___	___	___	___ Extremely important
Gift shops	Not important	___	___	___	___	___	___	___ Extremely important
Clothing shops	Not important	___	___	___	___	___	___	___ Extremely important
Ski shops	Not important	___	___	___	___	___	___	___ Extremely important
Local art and craft shops	Not important	___	___	___	___	___	___	___ Extremely important
Quality of cross-country ski trails	Not important	___	___	___	___	___	___	___ Extremely important
Overall community	Not important	___	___	___	___	___	___	___ Extremely important

25. How **satisfied** are you with the following types of services **in the Munising Area**? Place a check mark in the blank which reflects how you feel.

Restaurants	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied
Lodging	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied
Shopping	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied
Quality of cross-country ski trails	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied
Overall community	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied

26. How many days will you ski during this trip? _____ How many hours did you ski the day you picked up this survey? _____

27. How many days will you be within 15 miles of Munising on this trip? _____

28. How many nights will you be within 15 miles of Munising on this trip? _____

29. We would also like to know how much **you and your party** spent in the Upper Peninsula and in the Munising area on this trip **from 12:01 a.m. until midnight** on the day you received this questionnaire. Remember to include **cash, check, and credit card purchases** for the following items. If you did not buy an item during the 24 hour period, please record a zero in the blank. For purposes of this study, the Munising area is within 15 miles of Munising and includes the towns of Munising, Christmas, Au train, Shingleton, and Chatham. **Do not include Munising area purchases in the amounts recorded for the Upper Peninsula.**

	Upper Peninsula	**Munising Area**
Grocery food & beverages	$_____	$_____
Restaurant food and beverages	$_____	$_____
Vehicle related items (gas, etc.)	$_____	$_____
Lodging	$_____	$_____
Ski equipment	$_____	$_____
Clothing	$_____	$_____
All other items	$_____	$_____

30. How many people, including yourself, are you reporting expenditures for? _____

31. How many people, including yourself, are traveling with you? _____

32. Are the people in your party : ❑Family ❑Friends ❑Relatives ❑ club or organization

33. How many days have you been away from home on your trip? _____

34. Approximately how many miles is Munising from where you live? _____ Miles

35. Check the most important source from which you learned about skiing opportunities in the Munising area.

❑Friends or relatives	❑Travel brochure	❑Magazine/newspaper article
❑Chamber of Commerce	❑Forest Service employee	❑Forest Service publication
❑Hotel/Motel employee	❑DNR employee	❑DNR publication
❑Previous Trip	❑AAA	❑Upper Peninsula Travel and Recreation Association
❑Michigan Travel Bureau	❑Michigan Welcome Center	
❑Local ski shop	❑Out-of-town ski shop	❑Other_____

36. What is the highest level of education you have completed? [Circle years completed]

1 2 3 4 5 6 7 8	9 10 11 12	13 14 15 16	17 18 19 20
elementary	high school	college	graduate school

37. Where is your permanent residence?

City:_____ County:_____

State:_____ Zip code:_____

38. Median household income in Michigan is **$31,645**. In 1990, was your total household income before taxes: (Check One)

❑ More ❑ Less ❑ Approximately the same

39. How old are you? _____

Thank you for your assistance. Please drop off the completed questionnaire at the Forest Service Office at 400 E. Munising Street, Munising, or mail the completed questionnaire in the postage-paid envelope provided. If the envelope is missing, please send the completed questionnaire to:

Dr. Peter Forsberg
Travel, Tourism, and Recreation Resource Center
172 Natural Resources Building
Michigan State University
East Lansing, MI 48824-1222

Please write in the space below any comments you would like to make regarding cross-country skiing in the Munising area.

Dear Skier:

The Travel, Tourism, and Recreation Resource Center (TTRRC) at Michigan State University is conducting a study to assist public agencies in better management of Munising area ski trails. The Center is asking a select sample of skiers to complete this questionnaire. Your answers to the questions will be kept confidential and will only be reported in total along with other respondents to the survey. When you have completed the questionnaire, please either mail it to us using the postage paid envelope or drop it off at the joint Park Service/Forest Service visitor center in Munising.

Public agencies will use the results to better provide quality winter recreation opportunities. Your cooperation is vital to the success of this project as only a limited number of people can be contacted for their opinions. Please take a few minutes sometime today to complete this questionnaire and return it.

Sincerely,

Glen Bishop

Glen Bishop, TTRRC

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1. If in the future the National Park Service has to cut back its cross-country skiing program because of high maintenance costs, which of the options below would you would prefer.

   ❑ Closing trails ❑ Reducing grooming quality ❑ Charging fees ❑ Stop Grooming

2. One means of offsetting the costs of maintaining trails would be to charge higher fees. How much would you be willing to pay? If the amount is not high enough, this trail may be closed. *What is the highest total fee you would pay* ***per person*** *for a day of skiing at* ***this trail*** *in order to keep using* ***this trail*** *at its current level of grooming? Circle the dollar amount below that you would pay to keep using* ***this trail****.*

   $0.00 $1.00 $3.00 $4.00 $5.00 $6.00 $7.00 $8.00 $9.00 $10.00 $11.00 $12.00 $13.00

3. What is the highest total fee you would be willing to pay **per person** per day to use this trail for a day of skiing if it were **un-groomed?**

   $0.00 $1.00 $3.00 $4.00 $5.00 $6.00 $7.00 $8.00 $9.00 $10.00 $11.00 $12.00 $13.00

4. Would you continue to use National Park Service trails if they were no longer groomed and there were no fees? (check one)

   ❑Yes ❑No

5. Check each cross-country ski trail that you skied before November 1991.

   ❑ Munising ❑ Grand Marias ❑ School Forest ❑Hiawatha ❑Valley Spur ❑Christmas

   ❑McKeever Hills ❑Buckhorn

6. Some people would like to attract more cross-country skiers to the Munising area. For each set of possible actions, check the one in each set which you feel is the most attractive. (One X per line)

   a. _____Add more trails _____Add more loops to current trails _____ Offer naturalist guided ski trips

   b. _____Offer special ski packages _____Sponsor cross-country ski festival _____Offer ski lessons

   c. _____Provide warming huts _____Provide rest shelters along trails _____Provide outhouses along trail

   d. _____Provide trails which require more skill _____Provide easier trails _____ Improve scenic quality

   e. _____Increase signs on trails _____Increase signs on highway _____Increase publications

   f. _____Increase trail variety _____Provide better quality grooming _____Provide side by side grooming

7. Which letter from above is the most attractive action?_____

8. There are many reasons people do not ski as often as they would like to. If you strongly agree with one of the reasons below which may reduce the number of times people cross-country ski **in the Munising area**, check the blank closest to agree. If you strongly disagree mark the blank closest to disagree. If you feel somewhere in between, mark the blank between agree and disagree which most closely reflects how you feel about the reason. If you neither agree nor disagree, mark the middle blank.

It takes too much time to travel to Munising	disagree	____	____	____	____	____	____	____ agree
Concern about snow on the roads	disagree	____	____	____	____	____	____	____ agree
Concern about being unable to return home on time because of snow	disagree	____	____	____	____	____	____	____ agree
Fees charged at Forest Service ski areas are too expensive	disagree	____	____	____	____	____	____	____ agree
Munising is too expensive	disagree	____	____	____	____	____	____	____ agree
Obligations at home or work	disagree	____	____	____	____	____	____	____ agree
Members of family or group would rather go elsewhere	disagree	____	____	____	____	____	____	____ agree
Parking lots are not plowed	disagree	____	____	____	____	____	____	____ agree
Concern about medical care	disagree	____	____	____	____	____	____	____ agree
Concern about vehicle burglary	disagree	____	____	____	____	____	____	____ agree
I don't feel welcome in the community	disagree	____	____	____	____	____	____	____ agree
Lack of companions	disagree	____	____	____	____	____	____	____ agree
Concern about becoming lost	disagree	____	____	____	____	____	____	____ agree
Poor personal physical condition	disagree	____	____	____	____	____	____	____ agree
Too many snowmobiles around Munising	disagree	____	____	____	____	____	____	____ agree
Not enough to do in Munising	disagree	____	____	____	____	____	____	____ agree
Lack of ski rental	disagree	____	____	____	____	____	____	____ agree

9. How many times did you cross-country ski last season (November 1990 through March 1991)? _____

10. How many overnight trips did you make in the past season (November 1990 through March 1991) during which you cross-country skied ? _____

11. How many trips do you expect to make to cross-country ski in the Munising area this season (November 1991 through March 1992)? _____

12. Other than Munising, what one community would you visit to cross-country ski? Check none if applicable.

_____ ❑ None

13. Please circle your skill level: 1=beginner, 5=expert

beginner		intermediate		expert
1	2	3	4	5

14. What newspaper do you read most frequently? _____

15. Will you spend the night away from home while on this trip? ❑No ❑Yes

16. In the Munising area, where are you staying?

❑your second home ❑your own home ❑friend's home or friend's second home

❑relative's home or relative's second home ❑ motel/hotel

17. Is the place you are staying within 15 miles of Munising? ❑No ❑Yes

18. What is the main reason you are in the Munising area?

❑live here ❑visiting friends or relatives ❑recreation ❑business ❑Other _____

19. Please circle each winter recreation activity in which you participate.

snowmobiling ice fishing ice climbing camping hunting ice skating

sledding downhill skiing snowshoeing cross-country skiing Other_____

20. Please circle the **main** activity in which you will participate **on this trip**.

snowmobiling ice fishing ice climbing camping hunting ice skating

sledding downhill skiing snowshoeing cross-country skiing Other_____

21. How **Important** are the **availability** of the following features to you **when choosing** a cross-country skiing destination community? Place a check mark in the blank which reflects how you feel.

Low price motel	Not important	___	___	___	___	___	___	___ Extremely important
Mid-price motel	Not important	___	___	___	___	___	___	___ Extremely important
Ski lodge or ski resort	Not important	___	___	___	___	___	___	___ Extremely important
Basic kitchen (sink and microwave)	Not important	___	___	___	___	___	___	___ Extremely important
Child care	Not important	___	___	___	___	___	___	___ Extremely important
Swimming pool	Not important	___	___	___	___	___	___	___ Extremely important
Sauna	Not important	___	___	___	___	___	___	___ Extremely important
Ventilated waxing room	Not important	___	___	___	___	___	___	___ Extremely important
Laundry	Not important	___	___	___	___	___	___	___ Extremely important
Fast food	Not important	___	___	___	___	___	___	___ Extremely important
Family restaurant	Not important	___	___	___	___	___	___	___ Extremely important
Gourmet restaurant	Not important	___	___	___	___	___	___	___ Extremely important
Night Club	Not important	___	___	___	___	___	___	___ Extremely important
Family oriented entertainment	Not important	___	___	___	___	___	___	___ Extremely important
Cultural attraction	Not important	___	___	___	___	___	___	___ Extremely important
Bar	Not important	___	___	___	___	___	___	___ Extremely important
Gift shops	Not important	___	___	___	___	___	___	___ Extremely important
Clothing shops	Not important	___	___	___	___	___	___	___ Extremely important
Ski shops	Not important	___	___	___	___	___	___	___ Extremely important
Local art and craft shops	Not important	___	___	___	___	___	___	___ Extremely important
Quality of cross-country ski trails	Not important	___	___	___	___	___	___	___ Extremely important
Overall community	Not important	___	___	___	___	___	___	___ Extremely important

22. How **satisfied** are you with the following types of services **in the Munising Area**? Place a check mark in the blank which reflects how you feel.

Restaurants	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied
Lodging	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied
Shopping	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied
Quality of cross-country ski trails	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied
Overall community	Not satisfied	___	___	___	___	___	___	___ Extremely satisfied

23. How many days will you ski during this trip? _____ How many hours did you ski the day you picked up this survey? _____

24. How many days will you be within 15 miles of Munising on this trip? _____

25. How many nights will you be within 15 miles of Munising on this trip? _____

26. We would also like to know how much **you and your party** spent in the Upper Peninsula and in the Munising area on this trip **from 12:01 a.m. until midnight** on the day you received this questionnaire. Remember to include **cash, check, and credit card purchases** for the following items. If you did not buy an item during the 24 hour period, please record a zero in the blank. For purposes of this study, the Munising area is within 15 miles of Munising and includes the towns of Munising, Christmas, Au train, Shingleton, and Chatham. **Do not include Munising area purchases in the amounts recorded for the Upper Peninsula.**

	Upper Peninsula	Munising Area
Grocery food & beverages	$_____	$_____
Restaurant food and beverages	$_____	$_____
Vehicle related items (gas, etc.)	$_____	$_____
Lodging	$_____	$_____
Ski equipment	$_____	$_____
Clothing	$_____	$_____
All other items	$_____	$_____

27. How many people, including yourself, are you reporting expenditures for? _____

28. How many people, including yourself, are traveling with you? _____

29. Are the people in your party : ❑Family ❑Friends ❑Relatives ❑ club or organization

30. How many days have you been away from home on your trip? _____

31. Approximately how many miles is Munising from where you live? _____ Miles

32. Check the most important source from which you learned about skiing opportunities in the Munising area.

❑Friends or relatives	❑Travel brochure	❑Magazine/newspaper article
❑Chamber of Commerce	❑Forest Service employee	❑Forest Service publication
❑Hotel/Motel employee	❑DNR employee	❑DNR publication
❑Previous Trip	❑AAA	❑Upper Peninsula Travel and Recreation Association
❑Michigan Travel Bureau	❑Michigan Welcome Center	
❑Local ski shop	❑Out-of-town ski shop	❑Other_____
❑National Park Service employee	❑National Park Service publication	❑Park Service/Forest Service Visitor Center

33. What is the highest level of education you have completed? [Circle years completed]

1 2 3 4 5 6 7 8	9 10 11 12	13 14 15 16	17 18 19 20
elementary	high school	college	graduate school

34. Where is your permanent residence?

City:_____ County:_____

State:_____ Zip code:_____

35. Median household income in Michigan is **$31,645**. In 1990, was your total household income before taxes: (Check One)

❑ More ❑ Less ❑ Approximately the same

36. How old are you? _____ Your gender? ❑ Female ❑ Male

Thank you for your assistance. Please drop off the completed questionnaire at the Pictured Rocks National Lakeshore office at Sand Point, Munising, or mail the completed questionnaire in the postage-paid envelope provided. If the envelope is missing, please send the completed questionnaire to:

Dr. Peter Forsberg
Travel, Tourism, and Recreation Resource Center
172 Natural Resources Building
Michigan State University
East Lansing, MI 48824-1222

Please write in the space below any comments you would like to make regarding cross-country skiing in the Munising area.

Cross-Country Skiing Mail Questionnaire 1992

Travel, Tourism, and Recreation Resource Center
172 Natural Resources Building
Michigan State University
East Lansing, Michigan 48824-1222

Please answer the following questions in order and as fully as possible. Please answer all the questions on the front before reading the back. If your answer is none or don't know, write that answer or check the appropriate box. Most people will probably leave some of the spaces blank for some of the questions.

1. Of all the available cross-country ski destinations in the **Great Lakes Region** that were available to you during the winter of 1991-92, **which destinations come to mind**? Pleas list the nearest town.

   1. 4. ❑ None

   2. 5.

   3. 6.

2. What **one community** in the **Great Lakes Region** would you have **preferred** to visit for cross-country skiing during the winter of 1991-92? Check none if applicable.

   _____ ❑ None

3. **A.** What considerations come to mind when deciding on a X-C destination — **B.** List each of these considerations in order of importance

   1. 1.

   2. 2.

   3. 3.

   4. 4.

4. Please list all the communities in Michigan's Upper Peninsula which you visited for cross-country skiing between November 1, 1991 and March 30, 1992. ❑ None

5. Did you fill out a questionnaire distributed at one of the Munising area cross-country ski trails?
   ❑ Yes ❑ No
   If you responded "yes" to the above question, please go to part 13.

6. Which newspaper do you read most frequently? _____

7. Please circle each winter recreation activity in which you participate.

   snowmobiling ice fishing ice climbing camping hunting ice skating

   sledding downhill skiing snowshoeing cross-country skiing Other_____

8. How **important** are the **availability** of the following features to you **when choosing** a cross-country skiing destination community? Place a check mark in the blank which reflects how you feel.

Low price motel	Not important	___	___	___	___	___	___	___ Extremely important
Mid-price motel	Not important	___	___	___	___	___	___	___ Extremely important
Ski lodge or ski resort	Not important	___	___	___	___	___	___	___ Extremely important
Basic kitchen (sink and microwave)	Not important	___	___	___	___	___	___	___ Extremely important
Child care	Not important	___	___	___	___	___	___	___ Extremely important
Swimming pool	Not important	___	___	___	___	___	___	___ Extremely important
Sauna	Not important	___	___	___	___	___	___	___ Extremely important
Ventilated waxing room	Not important	___	___	___	___	___	___	___ Extremely important
Laundry	Not important	___	___	___	___	___	___	___ Extremely important
Fast food	Not important	___	___	___	___	___	___	___ Extremely important
Family restaurant	Not important	___	___	___	___	___	___	___ Extremely important
Gourmet restaurant	Not important	___	___	___	___	___	___	___ Extremely important
Night Club	Not important	___	___	___	___	___	___	___ Extremely important
Family oriented entertainment	Not important	___	___	___	___	___	___	___ Extremely important
Cultural attraction	Not important	___	___	___	___	___	___	___ Extremely important
Bar	Not important	___	___	___	___	___	___	___ Extremely important
Gift shops	Not important	___	___	___	___	___	___	___ Extremely important
Clothing shops	Not important	___	___	___	___	___	___	___ Extremely important
Ski shops	Not important	___	___	___	___	___	___	___ Extremely important
Local art and craft shops	Not important	___	___	___	___	___	___	___ Extremely important
Quality of cross-country ski trails	Not important	___	___	___	___	___	___	___ Extremely important
Overall community	Not important	___	___	___	___	___	___	___ Extremely important

10. What is the highest level of education you have completed? [Circle years completed]

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20

elementary high school college graduate school

11. How old are you? _____ Gender: ❑ female ❑ male

12. Median household income in Michigan is **$31,645**. In 1990, was your total household income before taxes: (Check One)

❑ More ❑ Less ❑ Approximately the same

13. Thank you for your assistance. Please mail the completed questionnaire in the postage-paid envelope provided. If the envelope is missing, please send the completed questionnaire to :

Dr. Peter Forsberg
Travel, Tourism, and Recreation Resource Center
172 Natural Resources Building
Michigan State University
East Lansing, MI 48824-1222

Please use the space below or an additional sheet for any comments you would like to make regarding cross-country skiing.