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THE IMPACT OF TOURISM UPON THE
USE OF OUTDOOR RECREATION FACILITIES

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DOCUMENTS

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This paper treats the several components of tourism as they impact upon the demand for the use of outdoor recreational facilities. It is proposed that properly accounting for tourism in demand estimates can assist in explaining some of the random variables now encountered in these estimates.

What is a Tourist?

Most individuals if asked to define a tourist would include a concept of travel for pleasure or on vacation. This propensity to include the purpose of travel in the definition of tourism has caused a great deal of difficulty. This paper will use the definition employed by the U. S. Bureau of Census in its Travel Survey: "A person who is traveling away from his normal home area and stays away from home overnight, or who makes a trip at least 100 miles away from home." This definition, generally, is used by the Department of the Interior and others such as the Western Travel Association.

The Organization for Economic Cooperation and Development (OECD) is somewhat more specific: "A tourist is any person visiting a country other than the one in which he resides for at least 24 hours: (1) for pleasure, for domestic purposes or for health; (2) to attend meetings of any kind, scientific, religious, athletic, etc.; (3) for business reasons; or (4) on a sea cruise, even if the duration of time in the country is less than 24 hours. Not counted are: (1) those going to the country to engage in work or business activity; (2) those traveling to establish residence; (3) students; (4) those commuting across borders to work; or (5) those passing through the country but not stopping.

The key point for purposes of this discussion is that anyone should be counted as a tourist in their travels away from home for any purpose. Such an individual adds to the population of the area in which he is traveling and to the demand for facilities as well, as generating economic activities in the provision of his subsistence in the area. Tourists may be of three kinds:

- (1) International
- (2) Interstate
- (3) Intrastate or between regions of the same state.

Such discussion has been generated on the subject of whether or not a tourist who vacations or engages in recreational activity in his own state is contributing to the economic activity of that state. If such individual makes demands upon the capacity of facilities such as motels or makes purchases from restaurants, there can be no question of his contribution to local demand. Should he, instead, engage in these activities elsewhere, activity in the former area would diminish to the extent of the given individual's demand.

Tourists have an impact in three different ways:

- (1) Their direct use of facilities. In other words, recreational capacity that they occupy and the money that they spend for recreation, for lodging, for food, etc.
- (2) Indirectly (a) through activities that they cause others to undertake such as relatives going picnicking with them and (b) through the multiplier effect. This latter is an economic concept used to name the overall result generated because tourists not only spend money in motels directly but the motels in turn take the funds which they receive from tourists and use them to buy lumber for repair, to pay their local taxes, and to pay salaries of their help. The people receiving this money in turn respond in the community for their various purposes, thus creating an indirect impact or "multiplication" of the initial expenditure. The concept appears often misused, but it is a useful concept in that it gives a better idea of what actually happens as a result of the activity from tourism.
- (3) A developmental effect results from investment that is generated from a recreational activity. Take, as an example, the construction of a reservoir. The water surface would give rise to water-related activities. People engaging in these activities would produce a demand for campground facilities, other overnight lodging, and for food services. If these facilities are built, they are a part of the developmental effect of recreational and tourist activities.

Volume Measures of Travel-Tourism

Tourism, recreation, and vacationing are closely bound with the concept of leisure which cannot be treated at this point. The dollar volume expenditures by American consumers for recreational and leisure activities combined is staggering; conservatively, it would total at least \$150 to \$200 billion. This item represents one of the largest components of consumer expenditures, and one that has, over a period of time, grown at a compound rate of approximately six percent annually. This rate is substantially higher than the growth in consumer disposable income. This fact means that the American consumers are annually expending more of their money for leisure and recreation as a percentage of the total. The figure quoted does include some items that are not appropriate for tourism; for example, included is approximately \$40 billion of expenditures in the home for leisure purposes including hobbies, entertaining, television, hi-fi, radio, etc.

A 1967 estimate including most of the elements of tourism resulted in the following figures: 2.5 billion person nights away from home; \$41 billion spent for food, lodging, and recreation; \$38 billion spent for automobiles; \$6 billion spent for passenger fare for a total of \$85 billion spent for all tourism.

Supplementing the above figures are the data from the 1967 Travel Census: 361 million person trips, made by 108 million people, representing 39 million households.

A closely related statistic is the total vehicle miles traveled in the United States, which in 1968 passed the one trillion mile level. It is difficult to comprehend the vast amount of automobile travel, rubber wear, and pollution spewed into the air by vehicles traveling one trillion miles. This travel is the equivalent of two million round trips to the moon or 40 million trips around the Earth!

The mode of travel is of some interest here also:

	<u>Trips</u>	<u>Miles</u>
Automobile travel	86%	77%
Commercial air travel	8%	17%
Bus travel	3%	2%
Trains and others	3%	4%
	100%	100%

An important point to note here is that air travel is gaining rapidly as a proportion of total traffic. In the 1959-68 period, the proportion of total miles belonging to air travel more than doubled from 4.3 percent to 9.4 percent.

A note is in order concerning travel and tourism in the Northcentral region. The 12 states of the Northcentral region have the largest number of total miles of travel of any region in the United States according to the 1967 Travel Census. This volume is a function of their population and the relatively large distances. Tourist expenditures reported by these 12 states total currently to approximately \$11 billion.

International Tourism - A Growing Factor

At \$20.5 billion, international tourism in 1969 was the largest single item of world trade and amounted to approximately 10 percent to the total. International tourism deserves attention by states of the Northcentral region not only because Americans spent approximately \$5.4 billion in 1970 to travel overseas but because there were 10,000,000 trips made by Canadians into the United States spending a total of 638 million dollars. Since the states of the Northcentral region lie next to Canada, they are certain to be influenced by this Canadian tourism.

The relative impact on a given nation's Gross National Product (GNP) often explains its attitude toward tourism. Canada, for example, does excellent research and places a continuing emphasis upon tourism while a state such as Michigan at times barely recognizes that tourism exists as an economic activity. The explanation lies in the fact that tourism to Canada's economy is a relatively important item; to the economy of the State of Michigan, as a whole, it is relatively unimportant compared to the automobile manufacturing industry. It is, however, important to many communities in outlying parts of that State.

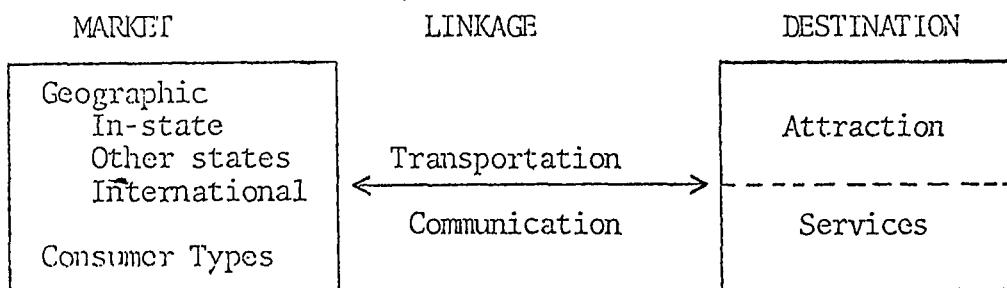
The impact of tourism as a relative factor has grown steadily in nations of OECD. This includes most of the developed world outside the Communist sphere such as western Europe, United States, Canada, Australia, and Japan. In the nine-year period from 1956 to 1965, tourism grew as a percentage of GNP from .4 percent to .8 percent. In selected individual countries, it is relatively much more important. In 1965, in Switzerland it amounted to 3.8 percent, in Spain 5.3 percent, and in Austria to 6.2 percent.

Elements of a Tourism System

In its simplest form, a tourism system consists of three components, which are graphically shown in Figure 1:

1. The market - people who travel, consisting of individuals living in specifically designated geographic areas.
2. The tourist destination area - where tourists go.
3. The linkage between the market and destination areas, consisting of both transportation and communication systems.

Figure 1. Travel-Tourism Model



A complete tourism system is highly complicated, however, for our purposes here, only the "destination area" need be broken down further. It may be considered as consisting of two parts:

1. The travel attractor which accounts for the reason that people travel to the area. The travel attractor may consist of an economic activity focus, an educational institution, a natural resource such as a lake at which people fish or an almost infinite list of other features.
2. Services needed by people while away from home. They include food, lodging, recreational services, gasoline sales and many others. These facilities and services may be either public or private in ownership and operation. Food and lodging services may themselves serve as the primary destination attraction as in the case of conventions. It can be seen that there exists a complex interrelationship among the travel attractor(s), the public services, the natural features of the area, and the private investment and services that are provided.

What Determines Tourism to an Area?

A generalized equation for tourism travel to an area can be written as follows.

$$Y = AX_1^B_1 X_2^B_2 X_3^B_3 X_4^B_4 X_5^B_5 X_6^B_6$$

Where: Y = Tourism to the area. In the case of a national park, the "Y" might include virtually all travel to the area. In the case of a picnic area which is part of a much larger attraction, it might be more appropriate to think of the fraction A/Y . Where "A" represents use of a given service or facility and "Y" equals the total travel to the area.

X_1 - represents the number of people in the market area since tourism and recreational use depend upon the numbers of persons.

X_2 - represents user costs or the price he must pay. An important item of cost is travel time and expenses. Other costs may include money for fees and accessibility both as to roads and as to knowledge and information about the destination area. Location may have an important influence upon cost, and hence upon volume of use. For example, the most visited element of the national park system, the great Smokey Mountains, lies directly in the path of the large population of the industrial midwest as they travel to Florida.

X_3 - represents travel propensity. This is a factor that relates to the likelihood that an individual may travel. The most commonly used surrogate for travel propensity is income. Income is used because it is easily measured and appears to be associated with many kinds of behavior. Certain behavior may even be more closely related to income than to nationality. This line of reasoning says that a relatively wealthy citizen of India would be more nearly alike in his lifestyles to a relatively wealthy American than he would to his fellow Indians. Other factors affecting travel propensity are age, occupation, and psychological variables having to do with an individual's desire for status or for "escape from" or "attraction to" a given area.

X_4 - represents the appeal or attractiveness of a destination area. Attracting capabilities is interrelated with travel propensity. In other words, a tourist will select a destination area having features compatible with his desire for status and his income among other factors. Attractiveness of an area will depend upon its critical mass which includes the number and scale of features there, plus the complementarity between these features for a given consumer.

X_5 - represents cost and substitutability of other competing areas that might be alternative destinations.

X_6 - represents the interaction between the destination and a given geographic market area, which is in addition to the tourism pattern. Migration is one such element. It could be either migration out of an area in which case visitation back to the area would be that of younger people visiting their parents and childhood home or it could be migration to an area that might be followed with visits by parents to their children or brothers and sisters or other relatives to people who have migrated out. Trade or business between the market area and the destination area is another important form of interaction. It is dramatically illustrated by the case of North and South Dakota and their travel to the Twin Cities in Minnesota. According to recent studies of the lodging market of the Twin Cities, it has been discovered that although the population centers of the two Dakotas lie at a greater distance from the Twin Cities than does the population center of Iowa, they contribute about twice as many people on a per capita basis as does Iowa. The explanation for this fact appears to be that the Twin Cities is the natural trade and industrial center of the Upper Midwest and that a great deal of commerce goes on between the Dakotas and the Twin Cities, hence attracting travel from the Dakotas into the Twin Cities in a disproportionate amount, compared to Iowa.

The above six factors are some of the more salient influencing travel to a given area by tourists. It could be expanded in great detail. On the other hand, the writer is aware of studies where interesting travel correlations have been achieved using only the population of the destination area.

The form of the equations given here is exponential which means that a curved line will result, turning upward if the exponents are greater than one and turning downward for exponents less than one. It could be argued that the form of the equation instead of being multiplicative and exponential as here, should be additive and linear. Such an equation, using the same variables, would have the form:

$$Y = A + B_1X_1 + B_2X_2 + B_3X_3 + B_4X_4 + B_5X_5 + B_6X_6$$

Supply - Demand Models

The effect of the above factors is illustrated in figures 2, 3, and 4 (page 148). Shown are simple supply and demand graphs with price of services or cost to consumer on the vertical axis and quantities of recreational services taken by the customer or supplied by the given area on the horizontal axis. The lines which are down-sloping to the right represent the demand schedule of a given consumer. The lines which are up-sloping to the right show the supply schedule for the specific recreation services in each of the respective areas.

Figure 2 illustrates a region that supplies only camping. Our customer has a demand for camping illustrated by line D_1 . In this case, the cost of any camping that might be supplied to the customer is higher than he is willing to pay for any amount of camping. Such a situation could exist when the area is too far away and the recreator will need to pay too high a price in terms of traveling time to get there. If these were the only considerations, the consumer would not camp in the area. Figure 3 illustrates an area in which the recreational service is assumed to be a national monument. S_2 (national monument) in Figure 3 is similar to S_1 (camping) in Figure 2; however, D_2 , demand for recreational services of the national monument, is much higher than D_1 . This means that he is willing to pay a higher price for these recreational services. If these were the only factors to be considered, the consumer would be willing to incur cost P_3 and to consume the quantity, Q_1 , of the recreation experiences illustrated in Figure 3.

In figure 4, an entirely different situation is assumed representing a complex of recreational services. Again, there is a minimum price to the consumer represented by P_1 , which for purposes of simplicity we assume to be primarily travel costs. The several supply and demand curves are added together. S_1 and D_1 represent the supply and demand schedules for camping. S_3 and D_3 represent supply and demand schedules for camping plus visits to friends in the same area. S_4 and D_4 represent supply and demand schedules for camping, plus visits to friends plus the appeal of a historical restoration. As each new factor is added to the recreational complex of the area, the demand curve of the individual shifts to the right and upward, assuming that these are all services that he is willing to consume. Note that if only camping were supplied that the consumer in question would not travel to the given area. However, as the result of the complex of camping and friends, his composit demand curve D_3 intersects S_3 at Price, P_4 and Quantity, Q_2 . When a historical site is added, $S_4 - D_4$, he is willing to consume Q_3 at price P_5 .

These simple illustrations show the effect of a varying level of demand for different kinds of services and the greater demand that would be generated with a complex of services in a given area. It will be understood that the manner in which both the supply and demand curve shift to the right is a highly complex matter and their precise shapes will vary with each recreation consumer.

The Process of Destination Image Building

We need now to inquire concerning the factors that cause a given area to be viewed as a destination area by recreation consumers. It is trite, but nevertheless true, to point out that the process is complex, that this image building process is partly a function of many things

that happen to the individual's background, his own needs for recreation. It is also a function of the salesmanship or promotion of the given destination area, its natural attributes and its development.

One reason for travel to a given area appears dominant. In most recreation destination areas from 50 to 90 percent of the consumers indicate "satisfactory recreation experiences" to be a major deciding factor. This reason includes a previous visit by the individual which he enjoyed, and/or the recommendation of friends or relatives who have been there. The fact that such a high proportion of people indicate actual experience as the most important factor in no way diminishes the importance of image building through various kinds of promotional activities. Many individuals indicate factors such as newspaper, magazine, television, and radio advertising as well as travel shows to be important. It would appear that information from multiple sources is instrumental, but with such a large number of stimuli impacting upon most people it is difficult to completely sort out those things which finally tip the balance in favor of a specific travel destination. Perhaps it is the reports of friends and relatives; on the other hand, reports of friends and relatives may only be a most obvious single factor along with a large number of other more subtle stimuli.

It is known that the appeal of a specific area to a given vacationer results from an interaction between the individual's needs and those things that are offered by the area. Factors involving the "escape hatch" from "behavior" and "attraction to" behavior as discussed by Mr. Tocher assume major importance.

For many people in the upper middle and upper classes, status is a major ingredient to be achieved in the vacation package. They thus seek to do something exclusive or unusual. This factor explains partly the relatively low appeal of the Upper Great Lakes area to higher-income families. The region competes poorly compared to a higher status trip to Acapulco or Hawaii. Hawaii apparently works hard at its status level. The result is that the income elasticity of demand for Hawaiian recreation is 4 to 1! Over the past 20 years as incomes in the United States have gone up one percent, the number of westbound visitors from the United States to Hawaii has increased four percent! Status may also be seen operating in such recreational activities as fishing which has experienced a relatively slow growth in participation. However, certain kinds of fishing have increased sharply in participation. One of these is Coho fishing which offers a new kind of fishing experience. Similarly, deep-sea fishing which has an element of exclusiveness, new adventure, and snob appeal, also has enjoyed a period of rapidly expanding demand.

The natural attributes of an area may unquestionably have an important bearing upon its appeal. However, many areas have significant natural attributes but lack the necessary complementing factors of development and promotion. There are, for example, many mountains in the Western USA but there are some mountains which receive a large amount of tourist attention and a great many more receiving almost none.

"Development" includes provision of subsistence - food and lodging. In some cases it may include preservation or reservation; it must include knowledge access and certain physical access, although physical intrusion need not necessarily be the major factor in access.

Examples of development can be seen in second home complexes that are springing up all over the country. It is understood that there are a half-dozen or more such complexes, some of them involving investments of \$20 million and more, developing within 50 to 100 miles of the City of St. Louis. Beyond question, complexes of such scale operate to radically alter the destination area image and the recreational demands made upon their locale. Another illustration is the Boyne Mountain and Boyne Highlands ski complex near Petoskey, Michigan. This complex represents a multi-million dollar investment. As long as eight years ago the corporation management had a full time sales staff operating at a national level, selling convention, conference, and workshop programs. The result is that they fill their facilities summer, winter, spring, and fall, not simply in the winter skiing season.

The Boundary Waters Canoe Area in northern Michigan is a striking area. But it would receive relatively a small proportion of its present visitors if it were not for the fact that there are a substantial number of outfitters at various access points to the area who are merchandising the area and providing services to people who wish an experience there. A similar illustration is the Crow Wing Canoe Trail which was developed by a county park board in central Minnesota. Here a 70-mile stretch of river suitable for family canoeing has been developed. The public investment was responsible for 16 campsites along the trail. But there is doubt that more than a relatively small number of the 50,000 user days now estimated for the area would have been generated had it not been for competent outfitters who serve the area. Development for public use of many features thus involves complementing governmental and private effort.

While many resorts in the northern Upper Great Lakes area have difficulty keeping their facilities full, one operation constantly turns customers away. This operation, in the western part of Minnesota, is selling a unique product - primarily "children programs." Families coming as guests have an enjoyable recreational experience which converts them into enthusiastic salesmen for the resort.

Recent private campground studies, conducted in Minnesota, further illustrate the point. Few people think of southwestern Minnesota as being a recreation area; however, this part of the State does have the Pipestone National Monument and next to the monument is a private campground. Studies of the market for this campground found that only 33 percent of its total customers were from the State of Minnesota and that they drew from a total of 44 other states in the United States, attesting to the wide appeal of an element of the National Park System. In contrast, a larger and in many ways better campground within 75 miles of the Twin Cities draws 92 percent of its customers from within the State of Minnesota and only 18 other states are represented among its clientele. While the latter is an excellent campground, it has no special feature to build a nationwide destination area image for it.

A discussion of lakes, campgrounds, and resorts largely ignores the largest tourist destination area in the State of Minnesota. This is the metropolitan Twin City area. Studies conducted in cooperation with the Metropolitan Tourist Committee developed a list of over 10,000 recreational features of the metropolitan area, and it is estimated that this survey barely got past the half-way point. Lodging industry market studies for the Twin Cities indicate that more than one-half, 52 percent, of those people staying in commercial lodging were traveling for other than business purposes. The area does indeed represent a tremendous recreational complex. Its appeal ranges from professional sports, a wealth of historical features, shopping, visiting friends and relatives, visits to the State Capitol, and educational services plus its appeal of lakes, parks, and rivers. The Twin Cities joins other major metropolitan cities in being what can probably be described as the most important tourist destination areas in the United States!

Components of the Tourism Market

The 1967 Travel Survey found that the proportion of individuals taking trips overnight or 100 miles away from home in the United States for given purposes to be as shown in table 1. Purpose is only one means of subdividing the tourism market; socio-economic groups, travel means, and overnight lodging are among others. Each component makes differing demands upon outdoor recreational services, hence a system of breaking travelers into logical component groups adds to understanding and accuracy of estimates. Selected groups are discussed below:

Table 1.

Purposes of Travel 1967

<u>Purpose</u>	<u>Percent of Total Person-Trips</u>
Business	14.0%
Attend Convention	2.2
Visits to Friends & Relations	42.2
Outdoor Recreation	17.2
Entertainment	3.5
Sightseeing	7.2
Other Pleasure Travel	11.7
Personal or Family Affairs	1.9
No response	.1
Total Percent	100.00

Total Person-Trips - 361,200,000

Source: National Travel Survey, 1967, U. S. Department of Commerce, Bureau of the Census.

Business travel at 14 percent of all person-trips, ranks lower as a proportion of total numbers of people traveling away from home overnight, or 100 miles, than commonly thought. Business travel to an area will vary with the volume and types of local economic activity, and it will also vary with a number of other factors such as the location with regard to other major business centers. Recreation as part of a business trip is quite common, including golf, fishing, boating, and hunting. In addition, business travelers compete with other tourists for the same lodging, food, and travel service facilities.

Convention and Conference Visitors. This component of the tourism trade is growing rapidly. It is estimated that over 300,000 conventions, conferences, and workshops are held in the United States annually. It is very common to combine travel for this purpose with vacation and recreation purposes, and to include the entire family as a part of the convention travel party. One absolute requirement for conferences in a given area is facilities. An increasing number of private facilities are being developed exclusively for the purpose of meeting the conference

market. In western Minnesota a large vacation-convention center is now being constructed which ultimately may have a capitalization in excess of \$10,000,000. Last June, a year before the expected opening, one of the owners stated that already \$1,000,000 worth of conference business had been booked. In a small southwestern Minnesota town called Sleepy Eye, there is a facility known as the Orchid Inn. This facility, in common with a few others in the State of Minnesota, serves a radius of 50 to 100 miles for local convention business for feed and fertilizer dealers, local government agencies, and many other types of gatherings.

Recreation Destination Visitors. These people are those who come to an area primarily for a vacation or weekend and for the expressed purpose of recreation. They are a complex group. One subpart of this group consists of resort guests. A Minnesota study of resort guests, now nearing completion, seems to indicate that resort guests, at least in the northeastern part of Minnesota, are narrowly oriented to the resort which they visit. They drive directly to it and straight home and make little use of other facilities in the area. One variation worth noting is a tendency for visitors from out-of-state to go to the larger cities on the way, indicating that they are combining some sightseeing and shopping along with their vacation trip. Campers are another component of the recreation-destination group. Generally, they know the area well and often use the outdoor recreation facilities extensively. Hunters, fishermen, and others are also part of this group which may partly combine with a number of other types of tourist traffic.

Sightseers. Most tourism studies indicate sightseeing to be high on the list of activities during vacation travel. It also appears that an increasingly large component of the travel market have travel-sightseeing as their major activity. This contention is supported not only by ORRC studies reporting sightseeing directly but by miles of travel and visits to parks and historic sites. In current northern Minnesota studies, travel-sightseers were found the largest spenders of the tourist group. Like the other classifications, this is an exceedingly complex group. One component of it consists of the middle-aged to elderly couple traveling after Labor Day and enjoying the scenery after the main tourist rush has past. Other components consist of families taking their children to see elements of the National Park System.

Second-Home Owners. This group constitutes a rapidly increasing number in the United States. It is estimated that there are now 1-1/2 million second homes and that the number is increasing at the rate of 200,000 to 300,000 every year. Second-home owners have a major impact upon the economy as well as the recreational resources

of an area although at this time there is not sufficient data to indicate the precise way in which second-home owners recreational demands may vary from others. Minnesota studies have shown the average second home to be occupied 75 days per year with the owner spending \$1,200 annually in the local community.

Those Visiting Friends and Relatives. This component is the largest of all the travel tourists. It is also the least affluent. All travelers in the U.S. Travel Survey of 1967 had an average income of \$8,000. This contrasts with an average income for those visiting friends and relatives of \$7,200 or almost 20 percent below the average of all travelers.

Each group discussed above, or other groupings that could be made, impacts differently upon outdoor recreational facilities. Second-home owners, for example, are 100 percent on vacation time while at their vacation property. Do they therefore place heavier demands per person-day upon recreation resources than the resident population? If so, to what extent?

Personal observation of individuals who are visiting friends and relatives indicates that they make heavy use of recreational facilities for camping, picnicking, fishing, etc. Not only do those who are visitors do this but they cause the local population to also increase their rate of activity during the period of the visit. Systematic studies to assist in quantification of these factors would be helpful.

Measurement of Tourism Impact

Five means of assembling data on tourism are suggested here. No one of these yields a complete story; however, they may be employed together to yield a reasonably comprehensive view of travel-tourists' use of a given region. A parenthetic note on input-output studies may also be of value. These studies are now gaining great popularity; however as ordinarily employed they cannot be directly used to the end of measuring tourism impact. The major limitation lies in the manner in which industries and their patrons are classified; input-output studies do not distinguish between the tourism component and the residential population.

The first three procedures suggested below are, in one degree or another, overall measures. They thus help to define the total limits of tourism within a region. The last two are use measures of specific facilities. All of these procedures have limitations which can only be treated superficially here.

A. Traffic Measurement - An inexpensive adaption of the traffic screen-line procedure has been employed with good results. Individuals have been stationed on the highway at selected sites on a random basis to record traffic, including: (1) license, (2) number and composition of occupants, (3) apparent travel purpose, and (4) equipment. Traffic is not stopped or interferred with in any manner, yet remarkably consistent results have been obtained using the procedure over a two-year period. By combining the qualitative measures thus obtained with total counts supplied by the Highway Department, it has been possible to derive reasonable overall estimates of total person-trips for automobile tourists. If this procedure were supplemented with limited origin-destination studies in which the traffic were stopped, it could yield most of the information needed for tourism cstimation.

B. Home Survey - of the market area is another procedure yielding overall data. These may be comprehensive as in the case of the Michigan Survey Research Center or more limited - such as telephone surveys in selected areas.

C. Lodging Market Analysis - will yield data on those staying overnight (except at friends and relatives). Excellent cooperation has been achieved with managers of lodging operations in conducting such studies. Usually it is possible to obtain data on place of origin, date of travel, and party composition. In addition, travel purpose can often be partially determined.

D. Firms Serving the Public - such as restaurants or auto service do not ordinarily distinguish between residential population and out-of-the-area clients. This data can be obtained by various procedures - usually involving personnel directly on the spot.

E. Outdoor Recreation Sites - Activity here may be measured. In addition, it is often possible to obtain specific information from a sampling of users of given sites, such as origin place and other activity patterns.

In an area of northern Minnesota consisting of three and one-half counties, about 4.3 million acres, and with a native population of about 33,000 people, cstimates have been compiled in Table 2 for the various recreation components for person-days of use. These use figures were derived by a combination of the methods described, including data from a Creel Census. Estimates for those visiting friends and relatives were derived by assuming the resident population to receive visitors in the same proportion as the total United States population.

The total of 903,000 person-days spent in the area by summer tourists is approximately 25 percent of the resident population person-days for the same season. As already noted, a differential weighting might well be placed on each of the several components if data were available as a guide. It is easily possible that the estimated person-days by tourists places more demand upon area recreation resources and facilities than does use by the resident population.

As a matter of further interest, total annual sales to tourists were estimated at \$9.9 million. This figure compares with a volume of forestry and logging of \$4.8 million, agriculture at \$11.3 million, sawmilling at \$1.3 million, and manufacturing at \$88.9 million. Manufacturing includes a Boise Cascade mill having in excess of 1,000 workers and a Polaris plant employing 800-900, plus two other smaller but nonetheless substantial operations.

Using similar methods in a seven-county area having a population of 130,000 people in West Central Minnesota, another 1970 study developed comparable data. The area is a transition between the lakes and forest on the north and the excellent Minnesota agricultural soil to the south. It is the most rural part of the State, having only one city of 10,000 or more population. For this area a figure of tourist person-days of use equivalent to 16 percent of the resident person days during the summer months was determined. Total volume of tourism in this rural seven-county area was determined to be in excess of \$21 million of direct expenditures.

Table 2

ESTIMATED TOURIST PERSON-DAYS IN THE LAKE OF THE WOODS
AND RAINY LAKE AREA OF MINNESOTA
SUMMER SEASON 1970

<u>Tourist Component</u>	<u>Person Days</u>
Second Home Owners & Visitors (total of 192,000 person days)	99,000
Visitors to Friends and Relatives	90,000
Resort Guests	258,000
Campers	39,000
Motel guests traveling for recreation	11,000
Day Users Sightseers, picnickers, boaters, fishermen, travel-through	200,000
Total Summer Recreation Person Days	687,000
Business Travelers - person days	216,000
Total Summer Tourism Person Days	903,000

The two examples indicate that tourists may have a substantial impact both upon the economy and the demand for recreational resources and services of an area. Substantial further sophistication in procedures is needed. However, it is suggested that procedures similar to those used here will substantially improve ability to estimate facility use in addition to measurement confined to the resident population.

DISCUSSION

Colburn: You keep encountering the concept that as far as tourism is concerned, economic benefits to the State of Michigan or the State of Minnesota is nil except for the people who come in from outside states.

Blank: In other words, the question is that we are taking in our own washing. What is the total foreign exchange budget of the U. S.? It is not very large relative to the GNP. You would have to say that the fact that we produce food or produce automobiles for each other is not generating economic benefit. If you were going to close the system and say that it had to come from outside, we could not survive. I think this harks back partly to our protestant ethnic --the feeling that tourism and recreation produce nothing. And if you are producing something palpable, it is producing something. If you are producing cultural goods, this is impalpable and produces nothing. And I think we still are hung up with our victorian attitudes on this philosophy. That is one reason why, frankly, if they didn't spend it in Michigan and went outside and spent it somewhere else, clearly there would be that much less business in Michigan. Is producing an automobile in East Lansing where you live economic production? Then why isn't a bowling alley? One of the best ways I have answered that is that I discovered going to a camp facility once that my family could live in 225 square feet of space. Yet I am living in a house that has at least 10 times that much space. What is this other 1,975 square feet of space in my house producing?

Koenings: As we are looking at questionnaires of all kinds such as the highway surveys, etc., where you ask, "Are you going to visit relatives or is it a vacation trip?" we don't really have in the surveys what these people are going to do the majority of the time.

Blank: And we aren't going to have either. I go to a lot of conventions and it has gotten to the point now where my family starts planning before I do. I have let it deteriorate to that point. We are dealing with a very messy situation and to purify this is just going to be an impossibility. What we have got to do is do the best we can. Almost every trip goes there because of a complex of reasons that there may

Figure 2. Camping

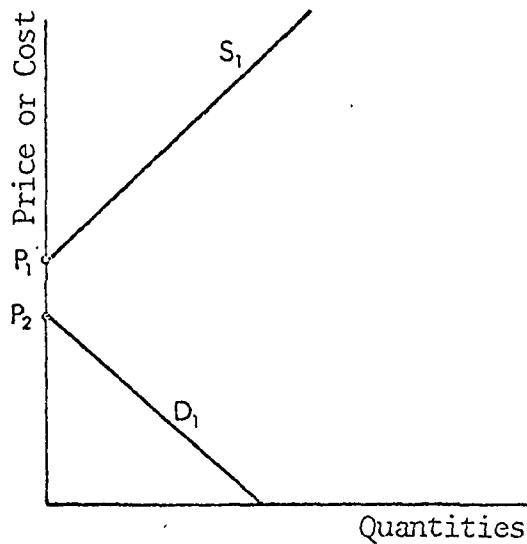


Figure 3. National Monument

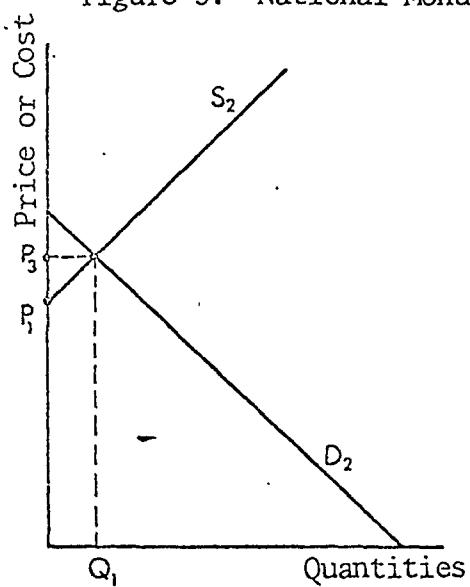


Figure 4. Recreational Complex

