

DETERMINING TRAVEL BEHAVIOR AND ECONOMIC IMPACT OF DAY TRIPPERS: A CASE STUDY OF NAPA COUNTY, CA

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Introduction

Nature based tourism is one form of special interest tourism that has experienced rapid growth over the past decade. This form of tourism attracts diverse visitors with multiple reasons for travel. Identifying distinct market segments within nature-based tourism is critical to marketing managers, who must use their limited resources strategically.

According to Yuksel (2003), the selection of a basis for market segmentation is critical because follow up management decisions rely on the information based on the selected bases. Several variables emphasize the attractiveness of distinct market segments (Wight 1997; Chhabra, 2005; Weiler and Ritchie, 1995). Repeat visitation has often been considered a significant base for determining segment potential (Oppermann, 1998) because of the underlying assumption that more frequent visits expand the magnitude of the economic impact. Furthermore, economic contributions are often used as a benchmark to evaluate market potential of distinct segments. Economic benefits that can accrue from nature based tourism have long been recognized (Boyd and Butler, 1996; Kim et al., 1998).

Using a data-driven segmentation technique, this study identifies day trippers from a randomly selected nature tourist population of Lake Berryessa, Napa County, California. The market potential of day trippers is assessed in terms of repeat visits and economic contributions.

Methods

The basis for analysis is a survey of visitors at Lake Berryessa (Napa County, California) in 2002. This lake is accessed via seven resorts located along its shores: Markley Cove, Pleasure Cove, Steele Park, Spanish Flat, Lake Berryessa Marina, Rancho Monticello, and Putah Creek. In addition, Lake Berryessa has a day use area, Oak Shores. All these sites provide a variety of recreational opportunities such as overnight camping, boat rentals, marinas, restaurants, stores, entertainment, and water equipment rentals. Non-resident visitors were intercepted at the seven resorts and the day use area. The research objective of the survey was explained to the visitors before they were asked to fill out the survey. Approximately five hundred visitors were intercepted and 400 usable surveys were obtained. Fifty-three percent of the visitors had plans to stay overnight. For the purpose of this study, overnight respondents were filtered out. The remaining sample comprising of 190 surveys by day trippers was analyzed. Split-half method was used to test sample reliability. The mean value across both the halves was similar for age, distance traveled, and repeat visitation. The correlation coefficient for each of the above variables was above .73.

The survey elicited information on travel behavior, spending, and the visitor's profile. A question was included to obtain market related information from visitors: "How did you find out about Lake Berryessa?" The following options were given: friend, Internet, magazine, newspaper and an "other (specify)" option was included to address

omission bias. Expenditure categories were suggested by the Bureau of Reclamation and visitors were asked for expenditures in six categories (slip/mooring fees, lodging, equipment rental, food and beverage, souvenirs and other (specify)). Prior to analysis, normality test was conducted to identify outliers. Furthermore, the independent variables were tested for multicollinearity. Tolerance statistic (with possible values from 0 to 1) was used as a measure of multicollinearity. According to Norusis (1998), a value for tolerance close to zero is an indication of intercorrelation. Because the resulting values were close to 1, the tests indicated non violation of the tolerance criteria. Finally, Ordinary Least Squares (OLS) regression analysis was employed to estimate the travel behavior model. All categorical variables were used as dummy variables in the OLS models. Repeat visitation was estimated with the following function:

$$\text{Log Times} = a + b_1(\text{find}) + b_2(\text{nights}) + b_3(\text{people}) + b_4(\text{distance}) + b_5(\text{income}) + b_6(\text{gender}) + b_7(\text{age})$$

Findings

General socioeconomic characteristics

Average age of the day tripper was found to be 34 years, and 66% of them were males. Approximately 49% of the day trippers had an annual household income below \$60,000, and the average number of people per party was 4. Sixty-one percent of the day trippers found out about the lake through friends and 36% found out about the lake through other sources such as newspaper, internet family, map quest, television, fishing guide, lived nearby, driving around the area, second homes, sign on freeway, and through locals in the area.

Trip characteristics

Approximately 12% of the respondents were visiting Lake Berryessa for the first time. The average number of visits in the past five years was 25. The average expenditure incurred was \$61.78, with the greatest expenditures in the categories of equipment and food and beverage. The average distance traveled was 52 miles.

Travel Behavior

Travel behavior of visitors is represented by the number of times visited. The multiple regression model of number of visits is statistically significant, with an F value of 3.43 ($p = .01$). Distance, age and gender have significant effects upon number of times visited. Females tend to make more frequent visits. Age was found to have a negative effect indicating preference by the younger age groups. Distance traveled also had a negative influence upon repeat visitation. As expected, day trippers who live close by tend to make more frequent visits.

Economic Impact

Total expenditures generated by visitor spending were found to be \$38.5 million. Maximum expenditures were incurred on equipment (\$22.7 million) followed by restaurants (7.1 million), souvenir (\$4.9 million) and slip and mooring fees (3.7 million). The model generated small multipliers for Napa County indicating leakages and the rural nature of the region. Type I multipliers (measuring the direct and indirect effects of change in economic activity) ranged from 1.08 to 1.99 and Type SAM multipliers (capturing the direct, indirect, and induced effects) ranged from 1.29 to 1.45. Impacts were determined in terms of total output, value added, employee compensation, indirect business taxes and employment. Total output, value added, employee compensation, and

indirect business taxes for 2002 were \$30.67, \$19.9, \$12.4, and \$2.9 million respectively. Table 2 provides a breakdown of total direct, indirect, and induced impacts generated in the region. Table 3 provides a breakdown of employment impacts. Total number of employees generated was 226 in 2001 and 456 in 2002. With regard to sectoral breakdown, Restaurants generated the maximum economic impact followed by shopping. Besides the visitor expenditure sectors, other sectors such as wholesale trade, real estate, automobile repair and services, hospitals, other business services, and personnel services also received significant benefits.

Table 1: Direct, Indirect and Induced Impacts

Total Impact	2002 (million \$)
Direct	35.63
Indirect	6.60
Induced	8.28
Total	50.51

Table 2: Direct, Indirect, Induced Impacts upon Employment

Total Impact	2002
Direct	452
Indirect	47
Induced	65
Total	563

Conclusions

For the tourism market researchers and destinations, the study makes three contributions. First, it provides information on the socioeconomic characteristics of day trippers. A nature-based day tripper is dominantly female with an average age of 34 years. She prefers traveling in groups and relies on word of mouth promotions. Furthermore, this segment is equally represented by both the income groups (higher and lower). Second, this study provides travel patterns that influence repeat visits. Younger people traveling short distances make more frequent visits. Third, it identifies day trippers as a distinct target market that generates 563 annual jobs for Napa County. Significant market activity (\$38.5 million) occurs at Lake Berryessa as a result of day trippers. Multipliers for industrial output, employment, employee compensation, and indirect business taxes indicate sufficient indirect effects.

The results of this study have important policy implications for destination marketing organizations in terms of market potential and appropriate marketing focus. Nature based day tourism can be used as a vehicle for providing economic support for the host community. As the results indicate, the rise in domestic tourism has led to new trends and patterns of tourist behavior. Younger people, especially females, are leaning towards nature based tourism. This distinct group of day trippers can be used as a target market with minimum strain on host community resources.

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ABSTRACTS
of Papers Presented at the
Eleventh Canadian Congress on Leisure Research
May 17 – 20, 2005
Hosted by
Department of Recreation and Tourism Management
Malaspina University-College
Nanaimo, B.C.
Abstracts compiled and edited by
Tom Delamere, Carleigh Randall, David Robinson
CCLR-11 Programme Committee
Tom Delamere
Dan McDonald
Carleigh Randall
Rick Rollins
and
David Robinson



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ISBN 1-896886-01-9



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