

IMPORTANCE-PERFORMANCE ANALYSIS: AN APPLICATION TO MICHIGAN'S NATURAL RESOURCES

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Abstract: In the state of Michigan, the nature-based tourist is becoming an increasingly important target market for providers of natural resources. To meet the demands of this growing market segment, evaluation strategies for nature-based sites are needed to maintain and improve customer satisfaction and loyalty. Evaluation strategies that incorporate consumer input can help to determine whether the needs of the tourists are being met. By using Importance-Performance Analysis, a marketing tool that emphasizes consumer input, the purpose of this study was to determine the satisfaction of the nature-based tourist who has visited Michigan's natural resources. The IP Analysis was used to examine attributes of the experience and to assess whether the state of Michigan is providing adequately for these attributes.

Introduction

Participation in outdoor recreation is one of the largest components of travel in Michigan. Of travelers to Michigan, seventy-two percent say they have participated in some form of outdoor recreation while traveling in Michigan (Holecek, 1995). The enormous amount of public land in the state of Michigan and the growth in tourism make nature-based tourism an increasingly important target market for providers of natural resources. In order to meet the demand of this growing market segment, evaluation strategies for nature-based sites are needed to maintain and improve customer satisfaction and loyalty. By embracing a marketing approach emphasizing consumer input, Michigan tourism officials can determine if the needs of nature-based travelers are being met and determine those areas that are currently considered deficient by those visiting Michigan's natural resources.

Purpose of the Study

The purpose of this study was to determine nature-based tourist satisfaction with the providers of Michigan's natural resources. The Importance-Performance Analysis (IPA) approach was used as the evaluation tool to assist in determining visitor's satisfaction. First developed as a

marketing tool by Martilla & James (1977) to assess consumer satisfaction, the IP analysis in recent years has been used by leisure professionals to assist in the evaluation of customer satisfaction (Guadagnolo, 1985; Hollenhorst, Olson Fortney, 1992; Hudson & Shephard, 1998). The IP analysis works first by determining what attributes or features are important to the consumer. Then information is solicited from the consumers regarding the relative importance of the various attributes and asks how well the agency under study provides for these attributes. The results of the IPA, which are displayed in an easy to interpret two dimensional graph, indicate areas of strength and weakness in the services provided for each attribute presented. The graph is divided into four sections providing an easy guide for management's focus. Decision makers are then able to identify attributes where concentration is needed in order to improve services deemed important by the consumer. The attributes used in IP analysis are generally developed as a result of information gained from previous studies or from focus groups.

The four quadrants on the IP graph are labeled according to the level of importance and performance of each feature or attribute. The quadrant in the upper right section is titled "Keep up the Good Work", indicating the attribute has high importance and high performance. The quadrant in the lower right section is titled "Possible Overkill" indicating the attribute has low importance but showing high performance. The third quadrant in the lower left section titled "Low Priority" indicates that the attribute has low importance and low performance. The fourth quadrant located in the upper left titled "Concentrate Here" includes features or attributes with high importance but rated low in performance. The quadrants "Keep up the Good Work" and "Low Priority" indicate to managers that expectations are being met for these attributes as relative importance is equal to the performance rating. Focus still needs to be given to these attributes to maintain satisfaction levels. The quadrant "Concentrate Here" indicates to managers that the attribute is important to consumers but the agency's performance is not achieving a satisfactory level of the importance. The quadrant "Possible Overkill" rates attributes low in importance while consumers feel the agency is providing high performance on these attributes. Two solutions that might arise from the findings in this quadrant of an IP analysis are that the provider of the resources can redirect attention to the attributes that are performing better than expected or the provider might be able to "position" negative attributes positively in the minds of the traveler or potential traveler.

The Sample

The sampling frame for this study was generated from telephone lists purchased from Survey Sampling, Incorporated of Detroit, Michigan. Data was collected by means of a telephone survey. A random sample of adults aged 18 and older who permanently resided in Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin, and Ontario, Canada were chosen to participate in the study. These geographic areas were chosen because they represent

the target areas which Travel Michigan, the state tourism bureau, identified as areas which tourist to Michigan originate. Adults, age 18 and older, were chosen because they represented those people who make the primary decisions to travel. A total of 350 completed interviews were conducted from May 1997 to August 1997. This number was deemed appropriate for a 95% confidence interval +/- 5%. Interviewing occurred on weekday evenings and weekend evenings and up to three callbacks were made for each contact. This calling procedure has proven to be effective in past studies performed by Travel, Tourism, Recreation, Resources Center at Michigan State University. Of the 350 interviews, a total of 185 people responded "yes" when asked if they "had traveled to Michigan for the purpose of outdoor recreation." These respondents were then asked to complete the importance-performance section of the interview.

Important-Performance Analysis

During questionnaire development, various IP attributes were derived from previous studies conducted about travel to Michigan and from the literature. A total of ten importance statements and ten performance statements were then chosen for the IP section of the interview. These attributes were found to be consistent throughout the previous studies and the literature. The ten attributes under study were scenic appeal, predictable weather, variety of places for water-based activities, variety of trails, scenic waterfalls, undisturbed nature, access to Great Lake coastlines, wildlife viewing, availability of public beaches and clean water. Respondents were asked to indicate the importance of each statement using a 5-point Likert scale, ranging from 1=not at all important to 5=very important and the performance of each statement was measured

similarly using the same scale, however worded "strongly disagree" to "strongly agree".

Mean and median scores were computed for each importance and performance feature (see Table 1). Overall mean and scores were computed for all attributes. According to several researchers (Guadagnolo, 1985; Hollenhorst, Olson and Fortney, 1992), using the overall mean scores as the positioning points for the mid-point of the graph allowed for a more critical appraisal than using the middle point of the scale. As mean and median scores were fairly close and mean scores provided more information, mean scores were used for plotting. The central positions or cross hairs for overall performance and importance were plotted. The axes were 3.53 and 3.71 respectively. The mean of each importance feature was matched with the mean of each performance feature and plotted on the I-P matrix.

Importance-Performance Findings

The findings indicate that clean water and scenic appeal were the two most important natural resource attributes while scenic appeal and variety of places for water-based activities performed the best (see Table 1). In addition, scenic waterfalls and variety of trails were the least important attributes when traveling for the purpose of outdoor recreation. According to travelers, the state did not do a good job of meeting the expectations of nature based travelers regarding the predictability of weather and the availability of scenic waterfalls. The area of high importance relative to low performance was seen in the attributes undisturbed nature and predictable weather. In the IPA graph, this quadrant signifies the features in which managers need to concentrate on higher performance to achieve customer satisfaction (see Figure 1).

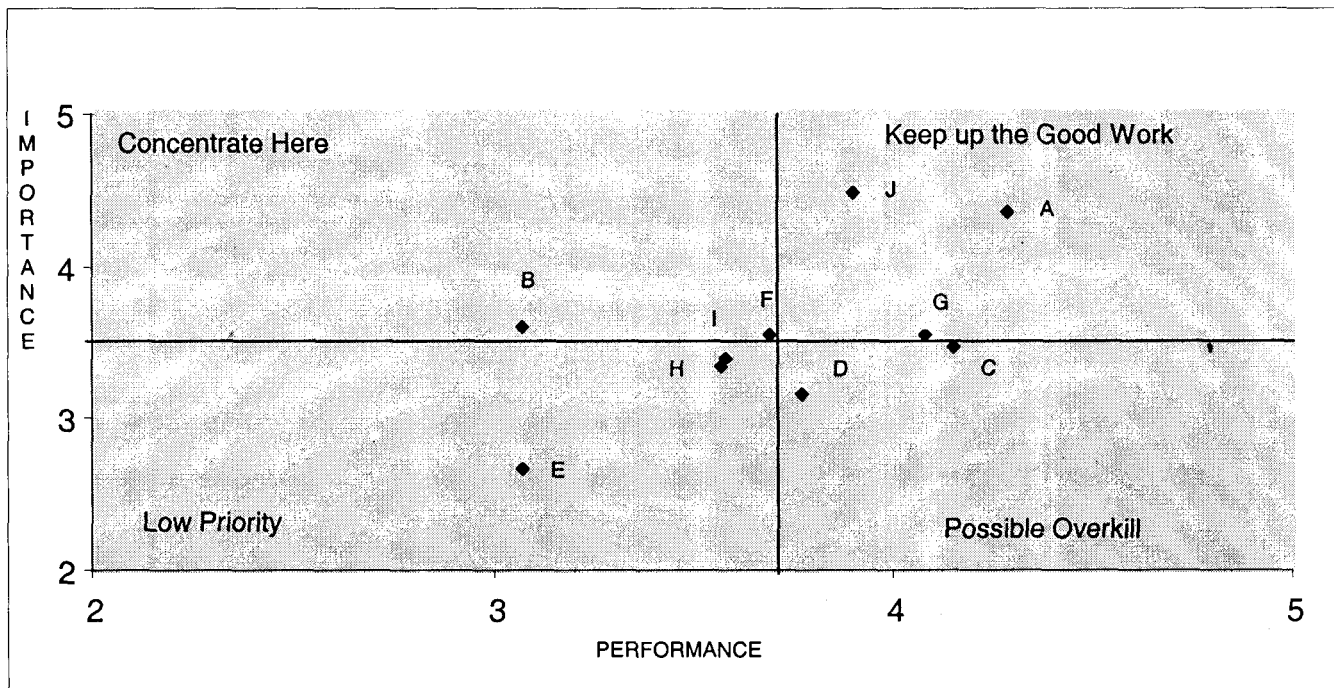
Table 1. Importance and Performance Attributes of Natural Resources

Code	Attributes	Importance ^a			Performance ^b		
		N	Mean	SD	N	Mean	SD
A	Scenic appeal	186	4.26	0.88	185	4.31	0.86
B	Predictable weather	186	3.60	1.34	185	3.07	1.13
C	Variety of places for water-based activities	186	3.48	1.19	182	4.15	0.99
D	Variety of trails	182	3.16	1.22	175	3.77	1.16
E	Scenic waterfalls	182	2.67	1.40	171	3.07	1.37
F	Undisturbed nature	184	3.55	1.29	181	3.69	1.12
G	Access to Great Lake coastlines	183	3.55	1.24	177	4.08	1.15
H	Wildlife viewing	185	3.34	1.27	177	3.57	1.08
I	Availability of public beaches	185	3.39	1.26	178	3.58	1.11
J	Clean water	185	4.32	1.01	183	3.82	0.94
	Overall Means	184	3.53	1.21	179	3.71	1.09

^a Mean values based on a 5 point Likert-type scale, ranging from 1=not at all important and 5=very important.

^b Mean values based on a 5 point Likert-type scale, ranging from 1=strongly disagree and 5=strongly agree.

Figure 1. Importance Performance Matrix of Natural Resource Attributes



Discussion

While undisturbed nature can be assessed and eventually managed, predictable weather cannot. One idea that the State might consider is to look at changing the perception of weather in the minds of the traveler. Advertisements might look to include weather as part of their image. For example, an advertisement could show a group around the campfire enjoying the experience despite a light rain shower. Positioning weather in the minds of the traveler as part of the experience might help to reduce negative perceptions. The attributes receiving low priority (i.e. low importance, low performance) were wildlife viewing, scenic waterfalls and availability of public beaches. While the agency is meeting visitor's expectations on these attributes, these attributes are some of Michigan's finest resources which suggests to managers that this is an area that can be improved by shifting the public's perceptions of the importance of these attributes. By concentrating in these areas, managers can focus on the unique settings that are particular to the Michigan outdoors. In the quadrant that IPA categorized as "possible overkill" were the attributes of variety of trails and a variety of places for water-based activities. The participants rated these areas low in importance, but high in performance. The IPA suggests that more effort is being put in these areas than is needed. Although, this could suggest that variety may be relatively unimportant to these respondents because they have specific ideas of what they wanted to do while visiting Michigan. Variety may possibly be attracting a diverse group of visitors to the area and refocusing efforts may be to the disadvantage of the agency. Prior to making decisions based on the IP matrix, providers should look at the attributes in each of the quadrants and understand their

meaning within the overall study before recommending or making changes.

Limitations and Future Research

One limitation to this study is the relatively small sample size. Further research needs to be conducted to see if this sample is representative of the study population. Another limitation of this study may be the conceptualization of the attributes tested. Future research might use focus groups to better understand the meaning of the attributes. The telephone survey used single item indicators and further questions were prohibitive allowing for multiple interpretations of the attributes. For example, focus groups might provide a more clear explanation of the attribute "undisturbed nature", does this mean lack of pollution or lack of uncharted areas? Focus groups could not only help clarify existing attributes but also assist in developing new attributes. Previous studies utilizing IP analysis used focus groups to create the features or attributes under consideration.

Participants in this study were not asked about their actual visitation patterns and the activities which were pursued. In future studies, visitation patterns and participation in specific activities could be tied into the IP analysis. This might allow for greater depth in the evaluation of the responses. In fact, it may be that traveler's responses vary with primary activity.

This study shows that the Importance-Performance Analysis is definitely one tool which can be used to evaluate customer satisfaction in a nature-based setting. The IPA provides managers with an easily understood marketing analysis of data collected. These results provide

useful information in understanding the nature-based tourist who uses Michigan's natural resources.

References

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