

Residents' Attitudes and Importance-Performance Evaluation toward the Impacts of Tourism in the Black Hills, USA^{1*}

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美國 Black Hills 地域의 觀光影響에 대한 住民態도와 重要度 - 成就度 評價^{1*}

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ABSTRACT

This study was conducted to get local residents' attitudes information and management information toward tourism impacts in Black Hills of South Dakota, U.S.A. It used Importance-Performance analysis to evaluate local residents' attitudes about the impacts of tourism. A total of 184 respondent data were used in this study. The return rate was 54%, 184 out of 340 questionnaires. Most respondents expressed high positive about the local economic impacts of tourism and environment impacts of tourism had not obvious negative on them. In 23 variables of tourism impacts there were a few significant differences in certain socioeconomic characteristics of the respondents as residence length and income. The results of Importance-Performance evaluation indicated useful future management decision information.

Key words : Importance-Performance, residents' attitudes, tourism impacts.

要 約

본 연구는 미국 South Dakota주 Black Hills 지역의 관광 영향에 대한 지역 주민 태도와 관리 정보를 얻고자 실시되었다. 관광 영향에 대한 지역 주민 태도를 평가하기 위하여 중요도-성취도 분석 방법이 이용되었다. 총 184개의 응답 자료가 연구에 이용되었다. 회수율은 340개 중 184개로 54%였다. 대부분의 응답자들은 관광의 지역 경제 영향에 대하여는 높은 긍정적 태도를 갖고 있었으며, 관광의 환경 영향에 대해서는 뚜렷한 부정적 태도는 보이지 않았다. 관광 영향의 23개 인자 중 거주 기간, 소득과 같은 응답자들의 사회 경제적 특성에 따른 유의적 차이가 일부 발견되었다. 중요도-성취도 평가 결과 유용한 장래 관리의사 정보가 제시되었다.

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INTRODUCTION

Many studies of residents' attitudes toward the impacts of tourism have been reported (Camasso & Moore, 1985; Liu & Var, 1986; Liu et al., 1987; Gramling & Freudenburg, 1992; Lankford & Howard, 1994; Kang et al., 1996; Wall, 1996; Haralambopoulos & Pizam, 1996). Residents' attitude studies toward tourism focused in the 1960s on the positive aspects of the industry. In the 1970s the research emphasized the negative aspects of tourism. Changing yet again, during the 1980s studies looked more for a balanced and systematic approach (Lankford & Howard, 1994).

A systematic analysis of the impact of tourism can help government planners, local decision-makers, tourism promoters, and others identify the issues in order to adopt appropriate policies and action (Lankford & Howard, 1994). An essential first step in conducting such longitudinal research is the development of a valid, reliable measure of resident attitudes toward tourism (Kang et al., 1996). Langford & Howard (1994) reported the creation of a useful tourism impact attitude scale made up of 27 items. It was developed in response to the need for standardized measurement of resident attitudes toward tourism development.

Importance-Performance (I-P) analysis is a tool to provide more useful information about residents' perception toward tourism. The I-P was developed as a marketing and management tool (Martilla & James, 1977). Originally, the I-P analysis assessed consumer satisfaction by first determining what attributes or features were important to the consumer, then establishing the relative importance of each feature and the agency's performance rating for each of the features (Guadagnolo, 1985). This information can then be used to identify discrepancies in participant expectations and agency performance, and to determine which features require attention to reduce the discrepancy (Siegenthaler, 1994).

More recently, recreation researchers have used the I-P technique as an evaluation tool for recreation service (Gadagnalo, 1985), visitor center op-

eration (Mengak et al., 1985), communication effectiveness (Richardson, 1987), staff evaluation (Havitz et al., 1991), state park cabins (Hollenhorst et al., 1992), motivational assessment in organizations (Williams & Neal, 1993), senior programs (Siegenthaler, 1994), open space environment function (Song, 1994), parks impacts (Hammit et al., 1996).

Tourism is an important part of most local economies throughout the United States. In the Black Hills of South Dakota, tourism is an integral part of the social and economic fabric of the area. However, little research has been conducted in the Black Hills concerning local residents' attitudes toward the impacts of tourism. The purpose of this study are to get local residents' attitudes information and management information toward tourism impacts in this region.

METHODS

1. Study Area

The area chosen for the study is South Dakota's Black Hills, an isolated upthrust surrounded by high, dry plains. It covers approximately 6,000 square miles (Froiland, 1990). The environment is fragile. As a result, changes become critical and more pronounced than in larger, more uniform ecosystems. In recognition of the site and situation, many land use agencies and tourism promoters have developed plans for the future use of the area. The Black Hills National Forest recently completed a new and mandated master plan, emphasizing the policy of multiple-use.

Custer State Park, managed as a financially self-sustaining natural resource, annually evaluates its role and responsibilities. Tourism is an important part of the local economy of the Black Hills. Summer is the high-use season, reflecting a pattern usually found in rural tourism (Oppermann, 1996). Approximately 200,000 persons live in the Black Hills, with the largest city being Rapid City located on the northeastern corner of the Hills.

2. Sampling and Data Analysis

Many small towns are scattered throughout the area, and there is a sizeable population living outside of incorporated areas. To gain a representative sample of the local residents, this study utilized a systematic sampling from a current area-wide telephone book. The limitation, of course, is that there are local residents with unlisted telephone numbers would not be surveyed.

The questionnaire was designed to measure local residents' attitudes toward tourism and to evaluate their level of perception of tourism impacts. The 23 items of residents' attitudes toward tourism impacts were selected from 27 the tourism impact attitude items developed by Langford & Howard(1994). Based on the pre-testing using South Dakota State University students, the 27 items were pared to 23 items. Social and economic variables were based on previous studies(Liu & Var, 1986 ; Gramling & Freudenburg, 1992 ; Lankford & Howard, 1994). A 5 point rating scale was used to record the answers.

In late February, 1997, an initial mailing of 340 questionnaires was made to residents listed in the Black Hills area-wide telephone book. One hundred and fifty six(156) questionnaires were returned, representing a first round response rate of 45.8%. In the middle of March, a second round of questionnaires was mailed to non-respondents. An additional 40 questionnaires were returned for a grand total of 196 returned questionnaires. Twelve of the questionnaires were unusable. Thus, the return rate for data use was 54%, 184 out of 340 questionnaires. Data analysis was performed with the SPSSPC+Program, which included frequency, mean score, and factor analysis.

3. I-P Analysis

Researchers often use the I-P method because it is quick, simple, and can be an important aid to managers in the decisionmaking process (Hollenhorst et al., 1992). Its graphics place it in an understandable format for facilitating the understanding of impacts of tourism.

I-P Analysis uses a step-by-step approach

(Mengak et al., 1986 ; Richardson, 1987). First, a list of attributes is generated through a literature search and review. A questionnaire is developed and pretested by a representative group. The second step involves the development and carrying out of the survey. People are asked to rate the importance of an attribute in an ideal situation and then rate the performance of the same attribute as it relates to an actual situation or product. A 5 or 7 point rating scale is used with responses ranging from high to low levels for both importance and performance(Mengak et al., 1986). The third step is the calculating and plotting of importance and performance means or medians for each of the attributes. They are plotted against each other on a two dimensional grid where importance is represented by one axis and performance is represented by the other. The final step is the presentation of the data in an easily interpreted form. This requires the construction of an action grid where each attribute is plotted according to its perceived importance and performance means. This graphical representation of the data necessitates that each of attribute falls into one of the four quadrants.

Attributes in Quadrant I are perceived as high on importance but low on performance. They represent areas requiring managerial attention(Concentrate Here). Attributes in Quadrant II are perceived as high on both importance and performance. Their status should be maintained(Keep Up the Good Work). Quadrant III attributes are perceived as low on both importance and performance, representing those attributes with a low priority for managerial attention(Low Priority). Attributes in Quadrant IV are perceived as low on importance but high in performance, suggesting an overcommitment by management of resources in these areas(Possible Overkill).

15 attributes items of I-P analysis in this study were selected from previous literature search and review(Pizam, 1978 ; Murphy, 1981 ; Camasso & Moore, 1985 ; Liu & Var, 1986 ; Gramling & Freudenburg, 1992 ; King et al., 1993 ; Lankford & Howard, 1994 ; Hernandez et al., 1996 ; Wall, 1996 ; Haralambopoulos & Pizam, 1996). Respondents were asked to rate the attributes using a 5

point rating scale. The mean scores were used for I-P action grid.

RESULTS AND DISCUSSION

1. Analysis of Residents' Attitudes

Previous research revealed that local residents' attitudes will differ based on age, length of residency, degree of exposure to the tourists, personal and locational contacts, and the distance from the residents' home to the tourist zone (Belisle & Hoy, 1980; Brougham & Butler, 1981). In this study, the ages of the respondents were 6% in their 20s, 16% in their 30's, 28% in their 40's, 20% in their 50's, 16% in their 60's, and 15% were 70 or older. Unlike the nation as a whole, women were 37% of the sample. This was due to the use of the registration list. In terms of their educational level, 41% of the respondents had a high school diploma or less,

24% had some college, and 35% had four or more years at a university. The annual income for 24% of the respondents was less than \$25,000 per year. 31% in \$25,000 - \$40,000, 25% in \$40,000 - \$55,000, and 20% of respondents was over \$55,000. And, 64% of the residents lived in this area for 20 years or more. Thus, a general profile would be that the residents were older and earned less income than the average American, were similarly educated, and had lived at their present site for two or more decades.

The respondents were asked their attitudes toward the impacts of tourism in the Black Hills. As noted in Table 1, respondents reached a level of high agreement concerning the positive economic effects or community role of tourism, including providing more jobs(76%), vital for the community(73%), and encouraging tourism in the community(71%). These findings agree in part with previous research about attitudes concerning

Table 1. Residents' attitudes toward tourism impacts

Impact variables	Mean	SD	Disagree (%)	Agree (%)
Against new tourism development	2.3	1.3	57.6	19.6
Encourage tourism in community	3.9	1.1	13.6	71.2
Should not attract more visitors	2.0	1.2	69.0	15.2
Encourage more intensive development	3.4	1.2	20.1	47.3
Tourism is vital for community	4.0	1.1	11.4	72.8
Community should become destination	3.6	1.1	13.6	52.7
Negative impact the environment	2.8	1.2	37.5	28.2
Noise level not appropriate	2.7	1.0	34.2	21.2
More litter from tourism	3.0	1.2	30.5	34.7
Limit outdoor recreation development	2.5	1.3	51.7	27.1
Crime has increased	2.9	1.3	38.6	34.2
Benefits outweigh consequences	3.5	1.2	18.0	52.7
Like to see tourism become main industry	2.7	1.2	41.8	25.5
Planning can control impacts	4.0	0.9	4.9	72.3
Will provide more jobs in community	4.0	0.9	4.9	76.1
Betters roads due to tourism	3.6	1.1	14.1	53.3
Public service improved due to tourism	3.3	1.1	15.8	42.9
Has increased my standard of living	2.5	1.2	45.1	20.7
More recreation opportunities	3.3	1.1	22.2	52.1
Provides highly desirable jobs	2.6	1.8	44.0	20.1
Shopping opportunities are better	2.9	1.2	35.9	36.4
Support local tax levies for tourism	3.0	1.4	35.8	41.8
Will play major economic role	3.7	1.1	11.9	58.1

* Scale : 5 points(1=strongly disagree, 2=disagree, 3=middle, 4=agree, 5=strongly agree),
SD : standard deviation.

* Disagree(%)=frequency of 1, 2 ; Agree(%)=frequency of 4, 5.

tourism: it has a positive economic benefit(Liu & Var, 1986 ; Haralambopoulos & Pizam, 1996). Yet, they feel that tourism has little effect on the economic well being of the individual, such as in the creation of desirable jobs(20%), or an increase in their standard of living(21%).

The local residents did not perceive that tourism hurt the local environment. This includes questions about the level of noise, more litter, and greater crime. As such, they were not opposed to new tourism and/or outdoor recreation development. The rest of the variables indicate that the residents perceived that the current level of tourism had no obvious effect on them. They perceived that the benefits of tourism outweighed the consequences. And respondents believed that planning could control the impacts of tourism.

Local residents' attitudes toward new economic

growth and change has been the focus of many studies(Camasso & Moore, 1985 ; Liu & Var, 1986 ; Gramling & Freudenburg, 1992 ; Lankford & Howard, 1994 ; Kang et al., 1996 ; Wall, 1996 ; Haralambopoulos & Pizam, 1996). Researchers have attempted to classify the sociocultural impacts of tourism in a broad context(Haralambopoulos & Pizam, 1996). It is recognized that tourism can have both positive and negative outcomes at the local level(Lankford & Howard, 1994).

One-way analysis of variables was used to investigate perceived differences in the impact of socioeconomic characteristics on tourism impacts (Table 2).

Previous research revealed that residents' attitudes differed according to the length of residence(Brougham & Butler, 1981 ; Lie & Var, 1986 ; Lankford & Howard, 1994). In this study,

Table 2. Differences by residence length and income.

Impact variables	Mean						
	Residence length			Income			
	<10yr.	11-20	21>	G1	G2	G3	G4
Against new tourism development	2.1	2.1	2.4	2.6	2.5	2.0	2.0*
Encourage tourism in community	3.5	4.1	3.9	3.6	3.8	3.9	4.1
Should not attract more visitors	2.4	1.7	2.0	2.2	2.2	2.1	1.6*
Encourage more intensive development	3.2	3.6	3.4	3.2	3.5	3.3	3.5
Tourism is vital for community	3.9	4.2	4.0	3.9	3.8	3.9	4.3
Community should become destination	3.5	3.6	3.6	3.3	3.4	3.6	4.0*
Negative impact the environment	3.2	2.8	2.7	3.0	3.0	2.5	2.7
Noise level not appropriate	3.1	2.6	2.7	2.8	2.9	2.7	2.6
More litter from tourism	3.5	3.0	2.9	3.4	3.2	2.9	2.7
Limit outdoor recreation development	2.7	2.5	2.5	2.8	2.6	2.5	2.3
Crime has increased	3.1	2.6	3.0	3.1	3.3	2.6	2.5**
Benefits outweigh consequences	3.5	3.6	3.5	3.4	3.5	3.6	3.7
Like to see tourism become main industry	2.6	2.6	2.8	2.6	2.4	2.7	3.0
Planning can control impacts	4.0	4.0	4.0	3.9	4.0	3.9	4.1
Will provide more jobs in community	3.9	4.1	4.0	4.2	3.9	3.9	4.1
Bettters roads due to tourism	3.4	3.3	3.7	3.6	3.3	3.6	3.7
Public service improved due to tourism	2.7	3.4	3.5**	3.6	3.1	3.4	3.4
Has increased my standard of living	2.3	2.8	2.5	2.7	2.3	2.6	2.6
More recreation opportunities	3.4	3.4	3.3	3.4	3.1	3.4	3.5
Provides highly desirable jobs	2.5	2.8	2.6	2.7	2.5	2.6	2.6
Shopping opportunities are better	2.9	2.7	3.0	3.1	2.5	3.1	3.0*
Support local tax levies for tourism	2.9	3.0	3.1	2.9	2.9	3.3	3.1
Will play major economic role	3.5	3.7	3.7	3.7	3.3	3.8	3.9

* G1=less than \$25,000, G2=\$25,000-\$40,000, G3=\$40,000-\$55,000, G4=over \$55,000

One-way analysis(F-test) : * Significant at the .05 level, ** Significant at the .01 level

Table 3. Factor analysis of tourism impact variables

Factor items	Loadings
Factor 1 POSITIVE IMPACTS (Alpha=.90, Eigen=8.496, Proportion=36.9%)	
Provides highly desirable jobs	.789
Shopping opportunities are better	.789
Has increased my standard of living	.737
Public service improved due to tourism	.714
Will play major economic role	.663
Bettters roads due to tourism	.646
More recreation opportunities	.616
Support local tax levies for tourism	.601
Will provide more jobs in community	.579
Like to see tourism become main industry	.576
Factor 2 NEGATIVE IMPACTS (Alpha=.81, Eigen=2.662, Proportion=11.6%)	
Negative impact the environment	.768
Noise level not appropriate	.748
More litter from tourism	.739
Should not attract more visitors	.678
Against new tourism development	.649
Crime has increased	.559
Limit outdoor recreation development	.511
Factor 3 COMMUNITY CONTRIBUTION (Alpha=.80, Eigen=1.113, Proportion=4.8%)	
Benefits outweigh consequences	.640
Community should become destination	.597
Encourage more intensive development	.574
Tourism is vital for community	.562
Encourage tourism in community	.502
Factor 4 MANAGEMENT (Eigen=1.081, Proportion=4.7%)	
Planning can control impacts	.575

only 2 of 23 variables were significant difference for length of residence. In two variables as more litter from tourism and public service improved due to tourism, the longer the respondent had lived in the Black Hills, the more positive they were toward tourism. The higher the income of the group, the more positive the perception toward tourism in 5 variables as new tourism development, attracting more tourists, and making the community a vacation destination. Also, there was a perception that crime had not increased.

Factor analysis was conducted to identify the interdependence dimensionality of the 23 variables.

This analysis was preceded by principle component analysis(PCA) with varimax rotation in order to prevent multicollinearity. Derivation of factor number was based on a eigen value of 1.0. Explaining of the four factors was 58% and the Alpha values of each factor was high(over .81). Four factors were identified through the factor analysis. Such factors can be used in future research into the impacts of tourism to better explain the variances in findings. Factor 1 is comprised of 10 items as positive impacts toward tourism(alpha=.90). Factor 2 has 7 items as negative impacts toward tourism(alpha=.81). Factor 3 has 5 items as community contribution (alpha=.80). And Factor 4 has 1 item as management.

Table 4. Importance and performance ratings of 15 tourism impacts attributes

Attributes	Importance			Performance		
	mean	SD	rank	mean	SD	rank
a. Employment opportunities increase	4.12	1.09	7	3.90	0.99	1
b. Increase in personal income	3.81	1.26	11	2.98	1.20	15
c. Improvement in standard of living	3.84	1.11	9	3.08	1.18	14
d. Improvement in local business	4.14	0.96	6	3.79	1.04	2
e. Historical cultural site development for tourism	3.67	1.15	13	3.66	1.09	3
f. Promote ecotourism	3.55	1.10	15	3.42	0.95	7
g. Encouragement of local cultural activities	3.77	1.05	12	3.61	1.02	4
h. Cultural exchange between residents and tourists	3.65	1.06	14	3.53	1.03	6
i. Preservation of local culture	3.86	1.10	8	3.59	1.07	5
j. Restraint of crime	4.20	1.20	3	3.26	1.28	12
k. preservation of environment	4.16	1.16	5	3.40	1.23	8
l. Noise control	3.83	1.12	10	3.13	1.14	13
m. Litter control	4.25	1.11	2	3.30	1.25	11
n. Pollution control	4.27	1.06	1	3.34	1.25	9
o. Traffic congestion control	4.19	1.05	4	3.33	1.29	10

* SD : standard deviation

2. Importance-Performance Findings

Previous studies of I-P Analysis have used mean scores.(Martilla & James, 1977 ; Mengak et al., 1986 ; Siegenthaler, 1994). In this study mean scores were used. The data is in Table 4.

And previous studies using I-P Analysis have positioned the cross hairs at the each mid-point of importance mean scores and performance mean scores(Mengak et al., 1986 ; Hollenhorst et al., 1992 ; Siegenthaler, 1994). In this study the overall mean scores for the importance was 3.95 and for the performance was 3.42(Fig. 1).

For importance evaluation, respondents gave a high score in life environment attributes such as pollution control, litter control, the restraint of crime, the control of traffic congestion, and the preservation of the environment. A low score of importance evaluation was found in ecological tourism and the cultural attributes such as promote ecotourism, cultural exchanges, the development of historical cultural sites, and the encouragement of local cultural activities.

In the performance evaluation, there was a high ranking for economic or local cultural attributes such as an increase in employment opportunities, an improvement in local business, the development of historical cultural sites, the encouragement of local cultural activities, and the preservation of local culture. A low score of performance evaluation was found concerning individual

economic benefit and life environment attributes such as an increase in personal income, and an improvement in their standard of living, noise control, restraint of crime, litter control.

The mean scores of importance and performance were plotted on the I-P Analysis matrix(Fig. 1). Each matrix was divided into four sections, providing an easy guide for possible management actions(Hollenhorst et al., 1992).

Quadrant I(Concentrate Here) indicated high level on importance but a fair level on performance. Five life environment attributes were involved in this section : restraint of crime, preservation of the environment, control of litter, control of pollution, and control of the congestion of traffic. Managers should concentrate their efforts for these attributes(Mengak et al., 1986).

Quadrant II(Keep Up the Good Work) reflected a high level on both importance and performance. There were two local economic attributes in this section : an increase in employment opportunities, and an improvement in local business. Management's responsibility is to make certain that these important features remain in this section(Guadagnolo, 1985).

Quadrant III(Low Priority) shows a low level of both importance and performance. Respondents believe that this was one of the least significant aspects of the impacts of tourism(Mengak et al., 1986). In this quadrant were three attributes : increase in personal income, improvement in standard of living, and noise control.

Quadrant IV(Possible Overkill) contained features that received low importance ratings and high performance ratings. There were four attributes in this section : historical cultural site development for tourism, encouragement of local cultural activities, cultural exchanges between residents and tourists, and the preservation of local culture.

These results indicate that Black Hills residents perceived tourism to be desirable for local economic development, coupled with an improvement in the life environment. Management should concentrate its efforts on the improvement of the life environment in this region.

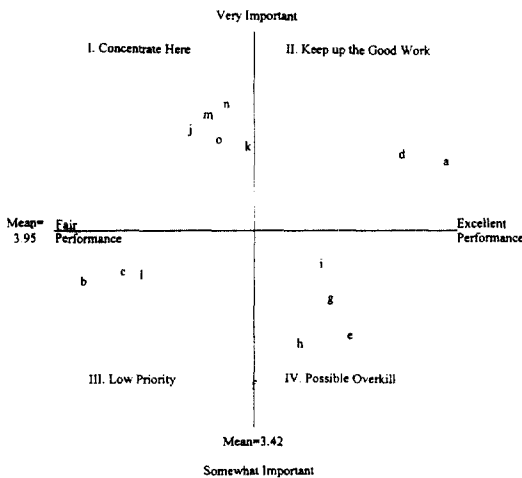


Fig. 1. Importance-performance action grid

CONCLUSION

Based on this study, several conclusions are offered. The use of the survey and the I-P Analysis is an effective way of obtaining rural residents' attitudes toward the impacts of tourism. The survey's results showed that most local residents of the Black Hills perceived positive economic benefit effects and community role of tourism development as previous studies(Liu & Var, 1986 ; Haralambopoulos & Pizam, 1996). They were for more outdoor recreation and tourism development. They did not believe that tourism brought with it an increase in noise, litter, or crime. And they did not perceive that tourism created desirable jobs or an increase in their standard of living. Plus, there was no relationship between the length of residency and the more negative the view of tourism. As the results of factor analysis for tourism impacts variables, 4 factors were identified as positive impacts, negative impacts, community contribution, and management. Explaining of the four factors was 58%.

The I-P Analysis was useful for identifying and evaluating the rural residents' attitudes toward the impacts of tourism. But it does not provide detailed and highly specific information. Rather, it is a guidepost for planners and other interested parties involved with the impacts of tourism within a region. The 15 attributes used to identify the impacts of tourism may not be applicable to other regions and their possible unique problems and solutions. A list of site-specific attributes drawn from a comprehensive list developed by the researcher(s) should be used to reflect the management concerns of each tourism region. Further study is needed into the complexity of tourism and its impacts, the attitudes of the local residents and how they may vary from region to region, and the identification of problems and possible solutions.

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