

# The Influence of Selected Behavioral and Economic Variables on Perceptions of Admission Price Levels

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*It has been suggested that there is a need to include variables other than traditional economic variables in models designed to assess visitors' reactions to admission prices. This study explored the influence of selected behavioral and nontraditional economic factors in influencing visitors' reactions. Analyses were undertaken on responses from five data sets that addressed pricing issues in the Texas state park system. Generally, the economic factors were more useful predictors than the behavioral factors. Especially useful were perceptions of value for the admission price and importance of admission price to a day visit. Ownership of an annual pass and level of loyalty were also useful predictors of price perceptions.*

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A challenge confronting tourism marketers is how to ameliorate participants' resistance to increases in price. Several authors have suggested the need for an assessment of the factors that influence attitude toward price, especially relating to an individual's level of acceptance of a price and the effect of level of acceptance on visitation rates (Crompton and Lamb 1986; Fedler and Miles 1989; Howard and Selin 1987; Kerr and Manfredi 1991; McCarville 1992).

A number of conceptualizations of how individuals learn about prices and how they process that information have been proposed (Monroe, Powell, and Choudhury 1986), but the model depicting price information processing that has been most widely recognized in the consumer behavior field is that developed by Jacoby and Olson (1977). The analyses reported in this study were guided by an adaptation of the Jacoby and Olson model, which is described in Figure 1. The study's objective was to assess the relative influence of selected behavioral and economic variables on perceptions of price levels. The guiding proposition was that perception of an admission price would be explained and predicted by selected behavioral and economic factors. The elements of intention to visit and visitation behavior shown in Figure 1 were not considered in this study.

*O-price* refers to the physical objective price. This is the stimulus entrance price to which visitors are exposed (see Figure 1). However, visitors' senses are selectively activated by the price stimulus, and their interest in and level of involvement with the stimulus is likely to determine the extent to which they meaningfully absorb the information (Assael 1995). *Encoding* is the interpretation and assignment of meaning an individual gives to the physical price. It has been defined as the process by which we select and assign a

word or visual image to represent a perceived object (Schiffman and Kanuk 1994). Thus, although individuals received the same external stimulus (*O-price*), perceptions of it are likely to be changed in the encoding process as individuals adapt it to fit an existing set of beliefs (Schoell and Gultinan 1995; Zeithaml 1982). For example, if the entrance price to a park is \$5, information acquired in the past or a visitor's existing financial status makes it likely that some will interpret the price as being relatively expensive, while others consider it to be inexpensive.

This process of adapting the *O-price* to fit an existing set of beliefs leads to different *psychological evaluations* of an admission price. The central construct in the psychological evaluation is the reference price since it establishes a reference point for the evaluation. It is the internally held standard that visitors use to evaluate new price information.

Reference price has been operationalized both by a single criterion and by multiple criteria (Jacobson and Obermiller 1989). Single-criterion definitions include "last price paid" (Gabor 1977; Uhl 1970), "the average price" (Monroe 1973), and "anticipated or expected price" (Assael 1995; Helgeson and Beatty 1987; Jacobson and Obermiller 1989; Lattin and Bucklin 1989; Winer 1986). Multiple criteria to operationalize the concept of the reference price have been used by (1) Jacoby and Olson (1977), who considered reference price to be an amalgam of "fair price," "price most recently charged," "price last paid," and "price normally paid"; (2) Klein and Ogilthorpe (1987), who defined it as a combination of "aspiration price" (the most you are willing to pay), "market price," and "historical price"; and (3) Diamond and Campbell (1989), who recognized two categories of definition: definitions relating to previous payment experience (e.g., average price paid and price last paid) and definitions such as fair price and the most you would pay.

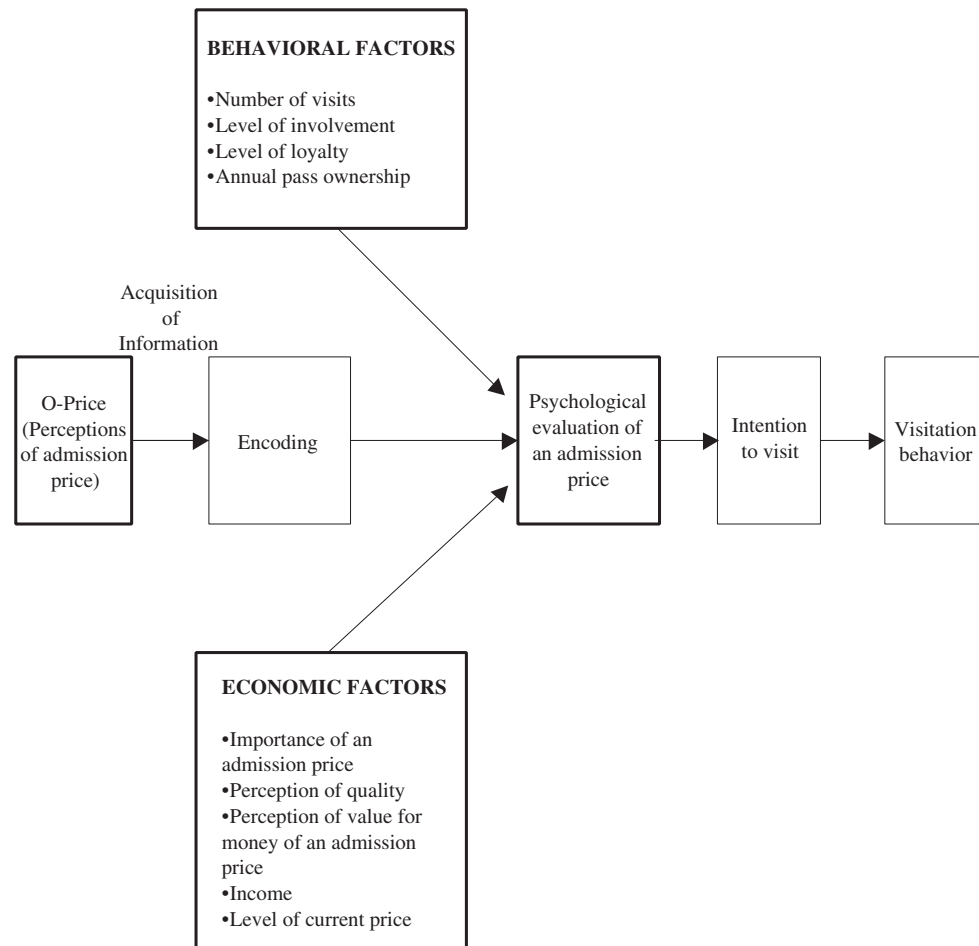
In addition to reference price, psychological evaluation of a price is likely to be influenced by a number of *behavioral and economic* factors (Zeithaml 1984).

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**FIGURE 1**  
**A MODEL OF PROCESSING OF PRICE STIMULI AND INFLUENCING FACTORS**



Note: This study is concerned with those parts of the model shown with a darker boundary.

## BEHAVIORAL FACTORS

Major *behavioral* factors influencing psychological evaluation of price are likely to include number of visits, level of involvement, level of loyalty, and ownership of an annual pass (see Figure 1).

*Frequent visitors* to an attraction may react negatively to price increases because this may diminish the number of times they can go (Cockrell and Wellman 1985). Furthermore, frequent visitors may expect discounts in return for their repeated visitation. Thus, they may resist a price increase if it is not accompanied by a quantity discount in the format of an annual pass.

On the other hand, past experience may reinforce visitors' positive beliefs toward an attraction and result in less resistance to price increases (Bovaird, Tricker, and Stoakes 1984; Reiling and Kotchen 1996). Thus, LaPage (1995) argued that repeat visitation is evidence of agreement with entrance prices, and Grimes, Pinhey, and Campos (1976) reported that experienced campers were more willing to pay higher amounts for camping facilities than inexperienced campers. Similarly, Kerr and Manfreda (1991) reported that frequency of visitation of park and recreation areas was

positively correlated with attitude toward payment. These studies suggest that experienced visitors are more likely to accept price increases and be less sensitive to them. Thus, level of visitation is likely to affect reaction to price increases.

*Level of involvement* is often measured by ownership of products relating to the activities of interest. Those owning multiple products may report negative responses toward current admission prices or an increase in price because these indicators of high involvement suggest that these individuals are likely to be frequent users and thus directly affected (Kim, Scott, and Crompton 1997). Again, however, an antithetical reaction may also occur. People who are highly involved with state parks may consider them to be a more central activity in their lives. Acceptance level theory postulates that there is a latitude range of acceptable prices (Sherif 1963). This range will vary among visitors but is likely to be larger for highly involved visitors (Fedler and Miles 1989; Howard and Selin 1987). Thus, these visitors are likely to react more positively to price increases and be less sensitive to price changes than low-involved individuals.

*Loyalty* is defined as "committed behavior that is manifested by propensity to participate in a particular recreation service" (Backman and Crompton 1991, p. 205). In this

article, behavioral measures of loyalty were operationalized as positive opinion leadership, intention to revisit, and continued future use.

In Backman and Crompton's (1991) study, price sensitivity was not highly correlated with loyalty. Nevertheless, it has been argued by others that loyal participants are more likely to be supporters of price increases because they receive valued benefits from their participation (Howard, Edginton, and Selin 1989). Vogt and Watson (1998, p. 6) concluded, "Loyalty is often the necessary condition for customer demand to be maintained when slight price changes occur." On the other hand, loyal visitors may reject a price increase if they are required to pay the increased price on every visitation and there is no quantity discount. Thus, people who are highly loyal to state parks may show negative reactions to price increases.

Those who own an annual pass are likely to be frequent visitors and supporters of the state park system. Vogt and Watson (1998) found those intending to buy an annual camping pass were more likely to consider a price acceptable and were not as sensitive to a price change. It seems likely that they would adopt a neutral attitude toward a daily admission price if they were not required to pay it. In contrast, those who do not own an annual pass may react negatively toward an entrance price increase because they are required to pay it on every visit to a park.

## ECONOMIC FACTORS

The economic factors that are likely to substantially influence perception of price include importance of the admission price in making a decision to go on a visit, perception of the attraction's quality, perception of value for money of an admission price, income level, and current price (see Figure 1).

The data sets used in the analyses in this study measured *importance of admission price* in the decision to visit. This was considered to be an indicator of price sensitivity since it is reasonable to conjecture that those who regard admission price as being important in the decision to visit are more likely to respond negatively to price increases.

*Quality* is an important determinant in perception of price. There is a linkage between perception of quality and price because visitors are likely to consider quality when they evaluate price (Crompton and Lamb 1986; Manning et al. 1996; McCarville 1992). An attraction perceived as being high quality is likely to be considered as worthy of being priced relatively high, and visitors are likely to be willing to pay more than those who judge an attraction as not being of high quality (McCarville 1990, 1992).

McCarville (1992) noted that *good value for money* occurs when users receive more benefits from services than their perceived costs. Perceived value will affect perception of price and level of visitation (Crompton and Lamb 1986; Gregersen and Lundgren 1996; LaPage 1995; McCarville 1990, 1992; Richer 1998). Crompton and Lamb (1986) suggested that perceptions of good value of a service may reduce users' resistance to price increases. Similarly, LaPage (1995) stated that visitors' willingness to pay depends on the value they perceive for the price paid.

Many studies have reported that *income level* is a key variable in predicting visitation (e.g., Ashley, 1990; Crompton

and Lamb 1986; Grimes, Pinhey, and Campos 1976; King and Richards 1977; Loomis 1980; Philipp 1995). Perceptions of price may differ among income levels (Grimes, Pinhey, and Campos 1976). Low-income people may perceive more financial constraints in visiting an attraction than other groups because of lack of vehicles and the cost of travel (Ashley 1990; Loomis 1980; Philipp 1995). Price awareness or sensitivity tends to be inversely related to income level, although those with very low incomes tend not to be especially aware of pricing levels (Morris and Morris 1990).

Finally, *level of current price* may influence perceptions of price increases. Most resistance to new entrance prices is likely to be found at higher levels of price. Howard and Cable (1980) reported that respondents showed increased resistance when prices of swimming lessons were gradually increased along a low, medium, and high continuum. Christensen and Richer (1998) reported that willingness to pay gradually dropped with increases in the suggested user prices for entrance to a wilderness area. A study of estimation of site demand conducted by Leuschner and Cook (1987) similarly reported that an increase in wilderness fees led to a decrease in number of visitations. These findings are consistent with traditional economy theory indicating that as price increases, demand will decrease.

## DESCRIPTION OF DATA SETS

Five data sets that were specifically designed to address pricing issues in Texas state parks were analyzed in this study. They were all commissioned during the 1990s by the Texas Parks and Wildlife Department (TPWD).

The survey procedures used in deriving the first four of the five data sets were similar, with an initial questionnaire being either mailed to a sample of respondents or handed to a sample of park visitors on site. In all four cases, follow-up procedures consisted of a reminder card mailed 2 days after the initial contact and two follow-up questionnaires mailed 2 and 4 weeks after the initial contact.

Data set 1 was derived from a sample of 3,200 names that were chosen randomly from a list of those holding a current Texas driving license, which was made available by the Texas Department of Transportation. The effective sample size from the mail survey was 2,688 after 512 uncontactable people were excluded. The total response rate was 40.7%.

The sample for data set 2 comprised visitors to nine Texas state parks. Visitors were personally handed the survey as they entered the park and were asked to return it in the prepaid envelope provided. The effective sample size was 2,373, and the overall response rate was 67.8% ( $n = 1,610$ ).

Data set 3 was derived from a mail survey comprising 2,964 individuals who had responded to a previous survey of park visitors conducted by the TPWD. The overall response rate was 56%.

The sample in data set 4 was drawn from two subsets of respondents sampled from data sets 2 and 3. They were resurveyed some 2 years after the original contact. An overall response rate of 54.8% was obtained ( $n = 880$ ).

Data set 5 was collected using computer-assisted telephone interviewing technology. The stratified sample was selected from 10 economic regions of Texas, which were defined by the state's comptroller. Response rates from the

**TABLE 1**  
**RESULTS OF PRINCIPAL COMPONENT FACTOR ANALYSIS WITH VARIMAX ROTATION**  
**FOR THE BEHAVIORAL ITEMS MEASURING INVOLVEMENT IN DATA SETS 3 AND 4**

Behavioral Involvement Item	Data Set 3					Data Set 4				
	Factor Loadings		Communalities	M	SD	Factor Loadings		Communalities	M	SD
	Factor 1	Factor 2				Factor 1	Factor 2			
Number of pieces of equipment owned	.50		.26	6.32	2.36	.52		.30	6.65	2.27
Number of books owned about parks, the outdoors, conservation, or camping	.64		.45	6.33	12.46	.52		.54	8.54	22.15
Number of subscriptions to park, outdoor, conservation, or camping magazines	.82		.68	0.98	1.45	.81		.66	1.13	1.42
Number of memberships in park, outdoor, conservation, or camping organizations	.79		.63	0.60	1.01	.80		.68	0.77	1.16
Expenditures spent on visiting parks, wildlife, and natural areas		.84	.72	368	823		.71	.52	434	1,445
Number of miles traveled to visit parks, wildlife, and natural areas		.85	.74	1,047	2,345		.79	.62	1,133	4,862
KMO (Kaiser-Meyer-Olkin)			.68					.69		
Eigenvalue	2.24	1.22				2.26	1.03			
Variance explained (%)	37.4	20.3				37.7	17.2			
Reliability alpha for each dimension	.61	.63				.64	.61			
Total scale reliability alpha			.66					.65		

Note: Factor 1—Ownership. Factor 2—Travel-Related Behavior.

10 regions ranged from 57% to 67%, and a total of 3,000 responses were collected.

**PRICE VARIABLE**

In the mail surveys, the dependent variable, perceptions of the admission price (O-price) to state parks, was operationalized by the question, “Daily admission fees to Texas state parks currently range from \$3 to \$5 per vehicle. Is this much too low, too low, about right, too high, much too high, or don’t know?” Responses were recorded on a 5-point Likert-type scale. The wording was adjusted slightly for the on-site sample (data set 2) and the phone survey (data set 5) to reflect their different contexts; in the case of the phone survey, it was reduced to a 4-point scale: *too low*, *about right*, *too high*, and *don’t know*.

**BEHAVIORAL AND ECONOMIC VARIABLES**

Number of day and overnight visits were recorded in an open-ended question. Six items were used to measure behavioral involvement adapted from Kim, Scott, and Crompton (1997). These items appeared in data sets 3 and 4. The six-item measures were transformed into z-scores because distributions of individual items varied widely, and the items’

units of measurement were different. The z-scores were used in a principal components factor analysis. The results (see Table 1) produced a consistent two-factor solution that reflected ownership and travel-related behavior. Grand means of the z-scores on these two dimensions were included in the regression analyses.

Behavioral loyalty was measured by five items. Table 2 shows results of the principal components factor analyses undertaken on the items in each of the three data sets in which they appeared. A one-factor solution consistently emerged. Grand means of the five items were used in the multiple regression analyses in data sets 2, 3, and 4.

Importance of admission price in a decision to visit was operationalized by 5-point Likert-type scales ranging from *not at all important* to *extremely important*. Five-point scales were also used to measure perceptions of quality (*very low quality* to *very high quality*), perceptions of value for money of the admission price (*very poor value* to *very good value*), and level of current price (*much too low* to *much too high*). Household income level was operationalized by six categories ranging from under \$15,000 to more than \$75,000.

**RESULTS**

Results from the five multiple regression models developed from the five data sets are reported in Tables 3, 4, 5, 6, and 7. Not all the behavioral and economic variables listed in

**TABLE 2**  
**RESULTS OF PRINCIPAL COMPONENT FACTOR ANALYSES WITH VARIMAX ROTATION ON FIVE LOYALTY SCALE ITEMS USED IN DATA SETS 2, 3, AND 4**

Loyalty Item	Data Set 2				Data Set 3				Data Set 4			
	Factor Loadings	Communalities	<i>M</i>	<i>SD</i>	Factor Loadings	Communalities	<i>M</i>	<i>SD</i>	Factor Loadings	Communalities	<i>M</i>	<i>SD</i>
I would encourage my friends and relatives to come to this park	.83	.69	4.46	.76	.82	.68	4.30	.88	.83	.69	4.39	.83
If this park was closed, it makes no difference to me since I would simply go to another park	.57	.33	3.32	1.32	.38	.40	3.46	1.35	.37	.33	3.37	1.43
I will not come back to this park often because it would get boring	.72	.51	4.13	1.03	.64	.41	4.21	1.02	.60	.36	4.21	.98
If another nearby park was cheaper, I would probably go to it	.61	.37	3.48	1.12	.63	.40	3.39	1.21	.59	.34	3.47	1.17
After I leave this park on this trip, I will say positive things about it to others	.80	.64	4.51	.75	.77	.59	4.32	.89	.78	.61	4.51	.79
KMO (Kaiser-Meyer-Olkin)		.74				.67				.67		
Eigenvalue		2.54				2.22				2.14		
Variance explained (%)		50.8				44.3				42.8		
Total scale reliability alpha		.71				.66				.62		
Grand mean		3.98				3.94				3.99		

**TABLE 3**  
**MULTIPLE REGRESSION OF SELECTED**  
**INDEPENDENT VARIABLES ON PERCEPTION**  
**OF AN ADMISSION PRICE (DATA SET 1)**

Independent Variable	$\beta$	t- Value	p- Value	Adjusted $R^2$
Importance of the admission price on a day visit	.33	5.61	.000	.22
Perception of value for money of the admission price	-.27	-4.56	.000	

Note: Tolerance is higher than .93; variance inflation factor is lower than 1.08.

Figure 1 were included in all five data sets. Table 8 summarizes the variables that were available in each data set and records those shown to be significant in Tables 3 through 7. The adjusted  $R^2$ s were .22, .33, .34, .37, and .13, that is, the percentages of the variability in the dependent variables that were accounted for by the independent variables.

Behavioral variables were generally relatively weak predictors. Level of behavioral involvement was significant in only one of the three regression models in which it was included, while level of behavioral loyalty had a negative relationship with perception of admission price in two of the three data sets, indicating that loyal people perceived admission prices to be lower. Ownership of an annual pass was significant in two of the three regression models in which it was included, indicating that people who paid the per visit price perceived admission prices to be higher than did annual pass holders.

In general, economic factors were better predictors than behavioral factors. Importance of admission price on a day visit was positively correlated with perception of admission price in three regression models. Perception of value for money of admission price was negatively associated with perception of admission price in five regression models. Income was a significant predictor in only one of the four data sets, and it indicated that lower income people had more negative perceptions of admission prices. Level of current price was incorporated into only one of the models, and it showed a positive relationship with perception of admission price.

**DISCUSSION**

Previous studies have reported that level of prior participation may influence price expectation or attitude toward the price because visitors establish a reference price through their experience (Cockrell and Wellman 1985; Gregersen and Lundgren 1996; McCarville 1996). Some studies have identified a negative relationship between level of participation and acceptance level of price (McDonald, Hammitt, and Dottavio 1985), while others have reported a positive relationship (Kerr and Manfreda 1991; LaPage 1995; Reiling and Kotchen 1996). Results of this study indicated that number of day or overnight visits was not significantly correlated to perceptions of admission price levels, implying that visitors' attitudes toward price were not affected by level of participation.

**TABLE 4**  
**MULTIPLE REGRESSION OF SELECTED**  
**INDEPENDENT VARIABLES ON PERCEPTION OF AN**  
**ADMISSION PRICE (DATA SET 2)**

Independent Variable	$\beta$	t- Value	p- Value	Adjusted $R^2$
Perception of value for money of the admission price	-.51	-22.19	.000	.33
Level of current prices	.16	7.22	.000	
Income	-.09	-4.00	.000	
Projected number of overnight visits	.09	3.88	.000	
Paid types <sup>a</sup>	-.06	-2.63	.009	

Note: Tolerance is higher than .84; variance inflation factor is lower than 1.01.

a. Dummy variable (0 = per visit payers, 1 = annual pass holders).

**TABLE 5**  
**MULTIPLE REGRESSION OF SELECTED**  
**INDEPENDENT VARIABLES ON PERCEPTION**  
**OF AN ADMISSION PRICE (DATA SET 3)**

Independent Variable	$\beta$	t- Value	p- Value	Adjusted $R^2$
Perception of value for money of admission prices	-.38	-10.70	.000	.34
Importance of the admission price on a day visit	.23	6.87	.000	
Travel-related behavior dimension of behavioral involvement	.11	3.56	.000	
Paid types <sup>a</sup>	-.09	-3.17	.002	
Level of behavioral loyalty	-.09	-2.84	.005	

Note: Tolerance is higher than .68; variance inflation factor is lower than 1.46.

a. Dummy variable (0 = per visit payers, 1 = annual pass holders).

**TABLE 6**  
**MULTIPLE REGRESSION OF SELECTED**  
**INDEPENDENT VARIABLES ON PERCEPTION OF AN**  
**ADMISSION PRICE (DATA SET 4)**

Independent Variable	$\beta$	t- Value	p- Value	Adjusted $R^2$
Perception of value for money of admission prices	-.37	-9.88	.000	.37
Importance of the admission price on a day visit	.28	7.68	.000	
Level of behavioral loyalty	-.12	-3.40	.001	

Note: Tolerance is higher than .71; variance inflation factor is lower than 1.40.

There is some evidence to suggest that low-involved respondents have higher price expectations than highly involved respondents (McCarville, Crompton, and Sell 1993). Thus, it was considered possible that those reporting low involvement with state parks may be especially sensitive to admission prices, but a significant relationship of this

**TABLE 7**  
**MULTIPLE REGRESSION OF SELECTED**  
**INDEPENDENT VARIABLE ON PERCEPTION**  
**OF AN ADMISSION PRICE (DATA SET 5)**

Independent Variable	$\beta$	<i>t</i> - Value	<i>p</i> - Value	Adjusted <i>R</i> <sup>2</sup>
Perception of value for money of admission prices	-.36	-12.66	.000	.13

Note: Tolerance is higher than .98; variance inflation factor is lower than 1.02.

nature emerged in only one of the three data sets in which it was tested.

This study provided evidence to reinforce the intuitive belief that people who are behaviorally loyal to state parks are likely to be more favorable to accepting current admission prices or a price increase. This may be explained by the assimilation and contrast effect, which suggests that highly loyal visitors to state parks are more likely to assimilate an entrance price and thus accept the pricing structure because they are most cognizant of the positive benefits they receive from state parks and better understand the rationale for the pricing policy (Howard, Edginton, and Selin 1989). There may also be a perception that they enjoyed a bargain price in the past. The results also offer empirical verification for the intuitive notion that per visit payers are likely to be more sensitive to admission prices than annual pass holders because they pay on every visit (Vogt and Watson 1998).

The perceived importance of admission price when making a decision to visit a state park for a day visit was a relatively consistent predictor of perception of admission price levels, suggesting that people who perceive admission price to be an important factor when visiting state parks are likely to be sensitive to changes in price. This finding is consistent with other studies that have discussed the effect of price sensitivity on attitude toward price levels (Gabor and Granger 1964; Kamen and Toman 1970; Morris and Morris 1990; Nagle and Holden 1995).

Perception of value for money of the admission price also was a strong predictor of attitude toward current price levels, suggesting that those who perceive the admission price to be a good value for money are likely to be less sensitive to a price change. This is supported by other studies in which perception of good value for money resulted in greater willingness to pay or decreased resistance to price increases (Crompton and Lamb 1986; Dodds and Monroe 1985; Dodds, Monroe, and Grewal 1991; Garvin 1987; Kerin, Jain, and Howard 1992; LaPage 1995; McCarville 1992; Monroe and Chapman 1987; Nagle and Holden 1995; Richer 1998; Szybillo and Jacoby 1974).

The literature is replete with studies indicating that low-income visitors tend to show stronger resistance to the imposition or raising of admission prices (Bamford et al. 1988; Grimes, Pinhey, and Campos 1976; Loomis 1980; Philipp 1995; Reiling and Kotchen 1996; Thompson and Tinsley 1979). However, in this study, income level was not a good predictor of perceptions of admission price. Several factors may have contributed to this apparently anomalous finding. The \$3 to \$5 levels of admission prices at Texas state parks may not have been sufficiently high to dissuade low-income individuals from visiting them. Even low-income visitors

**TABLE 8**  
**SUMMARY OF THE RESULTS**

Independent Variables	Data Sets									
	1		2		3		4		5	
	A	B	A	B	A	B	A	B	A	B
Behavioral factors										
Number of day visits	✓		✓			✓	✓			✓
Number of overnight Visits	✓		✓	+	✓		✓			✓
Level of behavioral involvement				✓		+	✓			✓
Level of behavioral loyalty			✓		✓	-	✓		-	
Own an annual pass			✓	-	✓	-	✓			
Economic factors										
Importance of admission price on a day visit	✓	+			✓	+	✓		+	
Importance of admission price on an overnight visit	✓	*			✓	*	✓		*	
Perception of quality							✓			
Perception of value for money of admission price	✓	-	✓	-	✓	-	✓	-	✓	-
Income	✓		✓	-	✓				✓	
Level of current price			✓	+						

Note: A: ✓ indicates independent variables tested in each subhypothesis. B: + represents positively significant independent variables at the .05 level; - represents negatively significant independent variables at the .05 level; \* represents variable that was not included in the final regression model because of multicollinearity. *R*<sup>2</sup> values are as follows: data set 1 = .22, data set 2 = .33, data set 3 = .34, data set 4 = .37, and data set 5 = .13.

may have considered the range of the admission prices as being within their latitude of acceptance. Another factor may be that low-income visitors were not concerned about levels of current admission prices or price increases because they knew that they could not visit state parks frequently due to other financial constraints such as lack of a vehicle or money for travel.

There was some tentative support for the notion that perception of admission price is influenced by the level of the current price. Others have reported that resistance increases with higher levels of the current price (Christensen and Richer 1998; Howard and Cable 1980; Leuschner and Cook 1987; Manning et al. 1996). People may be more resistant to an increase in the level of admission prices at higher price levels because of a belief that public park services should provide benefits and enjoyment to visitors at only nominal cost or without charge since they have already been paid for through taxes (e.g., Clawson and Knetsch 1966; Cockrell and Wellman 1985; Ellerbrock 1982; Harris and Driver 1987; McCarville, Driver, and Crompton 1992). This "public goods" position that public park and leisure resources are a communal good and thus should be subsidized with public funds is viewed by some as being a reasonable argument against raising fees to high levels (Hendon 1981; Howard and Crompton 1984).

The analyses reported here offer insight into the influence of behavioral and economic variables in psychologically evaluating price. This extends the findings from previous

studies that have been confined to an economic conceptualization or measured only the effect of actual prices on acceptance level. This broader design was an attempt to react to suggestions by others that factors in addition to economic variables need to be included in models to reduce the unexplained variance of visitors' reactions toward admission prices or their changes (Fedler and Miles 1989; Gratton and Taylor 1995; Howard and Cable 1980; Howard and Selin 1987; Kerr and Manfredi 1991).

All of the samples were derived from populations of Texans, which suggests that generalizability beyond the state may be questionable. However, there does not appear to be any reason to assume that these findings would not be equally applicable to other state park systems having similar day use fee ranges and structures. Certainly, the findings add to this body of literature, and as more studies of this nature are reported, more confidence can be placed on the generalizability of the patterns that emerge.

## REFERENCES

- Ashley, F. B. (1990). "Ethnic Minorities' Involvement with Outdoor Experiential Education." In *Adventure Education*, edited by J. C. Miles and S. Priest. State College, PA: Venture Publishing.
- Assael, H. (1995). *Consumer Behavior and Marketing Action*. 5th ed. Cincinnati, OH: South-Western College Publishing.
- Backman, S. J., and J. L. Crompton (1991). "The Usefulness of Selected Variables for Predicting Activity Loyalty." *Leisure Sciences*, 13 (3): 205-20.
- Bamford, T. E., R. E. Manning, L. K. Forcier, and E. J. Koenemann (1988). "Differential Camping Pricing: An Experiment." *Journal of Leisure Research*, 20 (4): 324-42.
- Bovaird, A. G., M. J. Tricker, and R. Stoakes (1984). *Recreation Management and Pricing: The Effect of Charging Policy on Demand at Countryside Recreation Sites*. Brookfield, VT: Gower.
- Christensen, N., and J. R. Richer (1998). "Maximum and Appropriate Price for Day Use in the Desolation Wilderness." Paper presented at the 7th International Symposium on Society and Resource Management, May, University of Missouri, Columbia.
- Clawson, M., and J. L. Knetsch (1966). *Economics of Outdoor Recreation*. Baltimore: Johns Hopkins University Press.
- Cockrell, D., and J. D. Wellman (1985). "Democracy and Leisure: Reflections on Pay-as-You-Go Recreation." *Journal of Park and Recreation Administration*, 3 (4): 1-10.
- Crompton, J. L., and C. W. Lamb Jr. (1986). *Marketing Government and Social Services*. New York: John Wiley.
- Diamond, W. D., and L. Campbell (1989). "The Framing of Sales Promotions: Effects on Reference Price Change." *Advances in Consumer Research*, 16: 241-47.
- Dodds, W. B., and K. B. Monroe (1985). "The Effect of Brand and Price Information on Subjective Product Evaluations." *Advances in Consumer Research*, 12: 85-90.
- Dodds, W. B., K. B. Monroe, and D. Grewal (1991). "Effects of Price, Brand, and Store Information on Buyers' Product Evaluations." *Journal of Marketing Research*, 28 (August): 307-19.
- Ellerbrock, M. (1982). "Some Straight Talk on User Fees." *Parks and Recreation*, 16 (1): 59-62.
- Fedler, A. J., and A. F. Miles (1989). "Paying for Backcountry Recreation: Understanding the Acceptability of Use Fees." *Journal of Parks and Recreation Administration*, 7 (2): 35-46.
- Gabor, A. (1977). *Pricing: Principles and Practice*. London: Heinemann.
- Gabor, A., and C. Granger (1964). "Price Sensitivity of the Consumer." *Journal of Advertising Research*, 4 (December): 40-44.
- Garvin, D. A. (1987). "Competing on the Eight Dimensions of Quality." *Harvard Business Review*, 65 (November-December): 101-9.
- Gratton, C., and P. Taylor (1995). "From Economic Theory to Leisure Practice via Empirics: The Case of Demand and Price." *Leisure Studies*, 14 (4): 245-61.
- Gregersen, H. M., and A. L. Lundgren (1996). "User Fees as a Park Management Tool: A Framework for Analysis." In *Recreation Fees in the National Park Service: Issues, Policies, and Guidelines for Future Action*, edited by A. L. Lundgren. St. Paul: University of Minnesota Press, pp. 123-33.
- Grimes, M. D., T. K. Pinhey, and D. E. Campos (1976). "Pay as You Play: An Analysis of Attitudes Toward a Fee-for-Use Approach to Outdoor Recreation." In *Scientific Research in the National Parks Conference Proceedings*, edited by R. M. Linn. Washington, DC: National Park Service, pp. 1013-19.
- Harris, C. C., and B. L. Driver (1987). "Recreation User Fees: Pros and Cons." *Journal of Forestry*, 85 (5): 25-29.
- Helgeson, J. G., and S. E. Beatty (1987). "Price Expectation and Price Recall Error: An Empirical Study." *Journal of Consumer Research*, 14: 379-86.
- Hendon, W. S. (1981). *Evaluating Urban Parks and Recreation*. New York: Praeger.
- Howard, D. R., and S. Cable (1980). "Determining Consumers' Willingness to Pay for Park and Recreation Services." *Trends*, 25 (2): 42-44.
- Howard, D. R., and J. L. Crompton (1984). "Who Are the Consumers of Public Park and Recreation Services? An Analysis of the Users and Nonusers of Three Municipal Leisure Service Organizations." *Journal of Park and Recreation Administration*, 2 (3): 33-48.
- Howard, D. R., C. R. Edginton, and S. W. Selin (1989). "Determinants of Program Loyalty." *Journal of Park and Recreation Administration*, 6 (4): 41-51.
- Howard, D. R., and S. Selin (1987). "A Method for Establishing Consumer Price Tolerance Levels for Public Recreation Services." *Journal of Parks and Recreation Administration*, 5 (3): 48-59.
- Jacobson, R., and C. Obermiller (1989). "The Formation of Reference Price." *Advances in Consumer Research*, 16: 234-40.
- Jacoby, J., and J. C. Olson (1977). "Consumer Response to Price: An Attitudinal, Information Processing Perspective." In *Moving Ahead with Attitude Research*, edited by Y. Wind and P. Greenberg. Chicago: American Marketing Association, pp. 73-86.
- Kamen, J., and R. Toman (1970). "Psychophysics of Prices." *Journal of Marketing Research*, 7 (February): 27-35.
- Kerin, R. A., A. Jain, and D. J. Howard (1992). "Store Shopping Experience and Consumer Price-Quality-Value Perceptions." *Journal of Retailing*, 68 (4): 376-97.
- Kerr, G. N., and M. J. Manfredi (1991). "An Attitudinal Based Model of Pricing for Recreation Services." *Journal of Leisure Research*, 23 (1): 37-50.
- Kim, S., D. Scott, and J. L. Crompton (1997). "An Exploration of the Relationships among Social Psychological Involvement, Behavioral Involvement, Commitment, and Future Intentions in the Context of Birdwatching." *Journal of Leisure Research*, 29 (3): 320-41.
- King, D. A., and M. T. Richards (1977). "Determinants of Choice in Outdoor Recreation." In *Outdoor Recreation: Advances in Application and Economics*, edited by J. M. Hughs. GNT WO-2. Washington, DC: USDA Forest Service, pp. 91-97.
- Klein, N. M., and J. E. Oglethorpe (1987). "Cognitive Reference Points in Consumer Decision Making." *Advances in Consumer Research*, 14: 183-87.
- LaPage, W. F. (1995). "New Hampshire's Self-Funding State Parks." *Different Drummer Magazine*, 2 (3): 29-32.
- Lattin, M. J., and R. E. Bucklin (1989). "Reference Effects of Price and Promotion on Brand Choice Behavior." *Journal of Marketing Research*, 26: 299-310.
- Leuschner, W. A., and P. S. Cook (1987). "A Comparative Analysis for Wilderness User Fee Policy." *Journal of Leisure Research*, 19 (2): 101-14.
- Loomis, J. B. (1980). "Monetizing Benefits under Alternative River Recreation Use Allocation Systems." *Water Resources Research*, 16 (1): 28-32.
- Manning, R. E., W. LaPage, K. Griffall, and B. M. Simon (1996). "Suggested Principles for Designing and Implicating User Fees and Charges in the National Park Service." In *Recreation Fees in the National Park Service: Issues, Policies, and Guidelines for Future Action*, edited by A. L. Lundgren. St. Paul: University of Minnesota Press, pp. 134-36.
- McCarville, R. E. (1990). "The Role of Cognitive Processes in Explaining Reactions to Price Changes for Leisure Services." *Journal of Park and Recreation Administration*, 18 (3): 74-86.
- (1992). "Successful Pricing in the Eye of the Beholder." *Parks and Recreation*, 27 (December): 36-40.
- (1996). "The Importance of Price Last Paid in Developing Price Expectations for a Public Leisure Service." *Journal of Park and Recreation Administration*, 14 (4): 52-64.
- McCarville, R. E., J. L. Crompton, and J. A. Sell (1993). "The Influence of Outcome Messages on Reference Prices." *Leisure Sciences*, 15 (2): 115-30.
- McCarville, R. E., B. L. Driver, and J. L. Crompton (1992). "Persuasive Communication and the Pricing of Public Leisure Services." In *Influencing Human Behavior*, edited by M. J. Manfredi. Champaign, IL: Sagamore Publishing, pp. 263-92.
- McDonald, C., W. Hammit, and F. D. Dottavio (1985). "An Individual's Willingness to Pay for a River Visit." In *Proceedings of the 1984 National River Recreation Symposium*. Baton Rouge: Louisiana State University, pp. 605-18.
- Monroe, K. B. (1973). "Buyer's Subjective Perceptions of Price." *Journal of Marketing Research*, 10: 73-80.
- Monroe, K. B., and J. D. Chapman (1987). "Framing Effects on Buyers' Subjective Evaluations." *Advances in Consumer Research*, 14: 193-97.



- Monroe, K. B., C. P. Powell, and P. K. Choudhury (1986). "Recall versus Recognition as a Measure of Price Awareness." *Advances in Consumer Research*, 13: 594-99.
- Morris, M. H., and G. Morris (1990). *Market Oriented Pricing: Strategies for Management*. Lincolnwood, IL: NTC Business Books.
- Nagle, T. T., and R. K. Holden (1995). *The Strategy and Tactics of Pricing: A Guide to Profitable Decision Making*. 2nd ed. Englewood Cliffs, NJ: Prentice Hall.
- Philipp, S. (1995). "Race and Leisure Constraints." *Leisure Sciences*, 17 (2): 109-20.
- Reiling, S. D., and M. J. Kotchen (1996). "Lessons Learned from Past Research on Recreation Fees." In *Recreation Fees in the National Park Service: Issues, Policies and Guidelines for Future Action*, edited by A. L. Lundgren. St. Paul: University of Minnesota Press, pp. 49-70.
- Richer, J. R. (1998). "Monitoring Visitor Response to the Adventure Pass Program." Paper presented at the 7th International Symposium on Society and Resource Management, May, University of Missouri, Columbia.
- Schiffman, L. G., and L. L. Kanuk (1994). *Consumer Behavior*. 5th ed. Englewood Cliffs, NJ: Prentice Hall.
- Schoell, W. F., and J. P. Guiltinan (1995). *Marketing*. Englewood Cliffs, NJ: Prentice Hall.
- Sherif, C. W. (1963). "Social Categorization as a Function of Latitudes of Acceptance and Series Range." *Journal of Abnormal and Social Psychology*, 67 (2): 148-56.
- Szybillo, G. J., and J. Jacoby (1974). "Intrinsic versus Extrinsic Cues as Determinants of Perceived Product Quality." *Journal of Applied Psychology*, 59 (1): 74-78.
- Thompson, C., and A. Tinsley (1979). "Income Expenditure Elasticities for Recreation: Their Estimation and Relation to Demand for Recreation." *Journal of Leisure Research*, 10 (2): 265-70.
- Uhl, J. (1970). "Consumer Perception of Retail Food Price Changes." Paper presented at the First Annual Meeting of the Association for Consumer Research, Amherst, MA.
- Vogt, C. A., and A. E. Watson (1998). "Brand Loyalty as an Indicator of Fee Support by Desolation Wilderness Visitors." Paper presented at the 7th International Symposium on Society and Resource Management, University of Missouri, Columbia.
- Winer, R. S. (1986). "A Reference Price Model of Brand Choice for Frequently Purchased Products." *Journal of Consumer Research*, 13: 250-56.
- Zeithaml, V. A. (1982). "Consumer Response to In-Store Price Information Environments." *Journal of Consumer Research*, 8 (March): 357-69.
- (1984). "Issues in Conceptualizing and Measuring Consumer Response to Price." *Advances in Consumer Research*, 11: 612-16.