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Fairness of prices, user fee policy and willingness to pay among visitors to a national forest

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ABSTRACT

Imposing user fees in Nature-Based Tourism (NBT) contexts has been a controversial issue. Based on the notions of justice and fairness, this study extended previous work examining the relationship between attitudes toward user fees and spending support. In a proposed structural model of price fairness, fee spending support, and willingness to pay (WTP), this paper identified the antecedents of WTP user fees, and empirically examined to what extent the data fit the model. Furthermore, the moderating role of place attachment in the model was investigated by using multiple-group structural equation modeling. Subjects (n = 562) were recreational tourists to a forest area in the southeast U.S. Results revealed that spending support partially played a mediating role in the relationship between perceived price fairness and WTP user fees. A multiple-group invariance test also demonstrated that while the degree of place identity moderated the effect of price fairness on spending support, the degree of place dependence did not influence the relationships among the antecedents of WTP.

1. Introduction

Since the establishment of the Fee Demonstration Program in 1996 and its replacement by the Federal Lands Recreation Enhancement Act (FLREA) in 2004, the legitimacy of charging fees in Nature-Based Tourism (NBT) contexts has been a controversial issue in the U.S. (McCarville, Reiling, & White, 1996; Reynisdottir, Song, & Agrusa, 2008). Imposing user fees for access to natural resources has been considered an effective visitor management tool in coping with social and/or environmental impacts (e.g. crowding, poor quality of facilities, or environmental concerns) on protected areas (Cessford, 2000; Manning, 1999). On the other hand, it has also been found that charges for using public leisure services could place constraints on some segments of prospective users (More & Stevens, 2000; Schneider & Budruk, 1999). Therefore, while the user fee policy of the national park and forest system has been justified from an economic perspective (i.e. alternative way to supplement insufficient government budget), the policy has been criticized in terms of social justice (Nyaupane, Graefe, & Burns, 2009). This is one of the main reasons why numerous researchers have studied user fees from social psychological perspectives including fairness, equity, and willingness to pay.

Research has also shown that if individuals agree with the purposes of fee spending (e.g. environmental protection), they are more likely to support user fees policy (Kyle, Absher, & Graefe, 2003; Vogt & Williams, 1999; Williams, Vogt, & Vittersø, 1999). Williams et al. (1999) argued that if people understand benefits from fees paid, they would be more willing to pay. However, Vogt and Williams (1999) found that park users tended to support user fees only when the revenues were used to maintain current service provision rather than to develop new service programs. That is, campers who were given the 'maintaining' fee purpose condition generally agreed with the fee purpose more than those given 'improving' condition in the experiment.

More recently, Kyle et al. (2003) observed that place attachment can also play a role in the way recreationists respond to fees for public land recreation. They observed that the place identity dimension of place attachment played a significant moderating role in the relationship between visitors' attitudes toward fee program and spending support. For individuals who expressed an emotional attachment to the resource (i.e., place identity), there was a stronger relationship between their attitudes toward the fee program and their support for spending fee revenue on activities related to resource conservation.

Although this previous work has contributed to building a conceptual framework for understanding the effect of attitudes toward fee program on fee spending support, it has also raised additional research question such as using alternative notions

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related to attitudes. In their study, Kyle et al. (2003) defined the attitudes as overall feeling about user fees, but did not deal with a fairness aspect, one of the most challenging but important factors influencing attitudes toward recreation fees (McCarville et al., 1996). Over the years, only a few researchers have attempted to empirically test the effect of perceived fairness on attitude toward user fees (Ajzen, Rosenthal, & Brown, 2000; McCarville et al., 1996; Park, Ellis, Kim, Ruddell, & Agrusa, 2006).

Therefore, the main goal of this study is to extend previous research on the moderating role of place attachment on the relationship between attitudes toward fees and spending support by adopting the notions of justice and fairness. Different from previous work, this study proposes a model of price fairness and fee spending support by adding willingness to pay (WTP) because only a few researchers have examined WTP in the context of price fairness in spite of its importance (Ajzen et al., 2000; Schröder & Mieg, 2008). This study also involves testing of a conceptual model in which three constructs (price fairness, spending support, and place attachment) are predictors of WTP. Technically, structural equation modeling (SEM) is used in favor of advantages of SEM which can accurately estimate latent variables by controlling for measurement error in comparison to multiple regression in previous studies. Accordingly, this study has three objectives: 1) to determine a model that better shows the relationships between the proposed antecedents and WTP user fees, 2) to examine the mediating role of spending support on the relationship between price fairness and WTP, and 3) to investigate the moderating role of place attachment on the relationships tested in the model. Based on the study objectives and literature review in the following section, four hypotheses in the conceptual model will be formulated.

2. Literature review

2.1. User fees

Entrance or user fees in a Nature-Based Tourism (NBT) context have been utilized as effective visitor management tools. From a park managerial perspective, Buckley (2003) argued that user fees generally can change visitors' behavior by: controlling overall visitor numbers, diverting a particular recreation activity to a specific area, and/or encouraging visitors to reduce individual *per capita* impacts during particular activities. However, he pointed out that charging fees is only one of the diverse optional tools available to achieve management goals. While, under some circumstances, a small fee can have substantial influence on visitors' behavior, under other circumstances a large fee can hardly have any influence on their behavior. This is also consistent with the contradictory results of studies about the effect of entrance/user fees on visitors' behavior, particularly, in low-income groups. While some researchers have found that individuals living in poverty are more sensitive to user fees (More & Stevens, 2000; Schneider & Budruk, 1999), others have revealed that moderate fees do not influence low-income peoples' visitation as they are already under-represented (Burns & Graefe, 2006; Cockrell & Wellman, 1985; Ostergren, Solop, & Hagen, 2005). Some researchers, therefore, have suggested that charging fees and the resultant impact should be considered in relation to other factors such as visitors' characteristics, the way in which the fees are paid, the degree of crowding, and the availability of alternative sites (Buckley, 2003; Garrod & Fyall, 2000; Knapman & Stoeckl, 1995; Lindberg & Aylward, 1999).

In spite of their managerial and economic benefits, entrance or user fees for natural resource recreation areas have attracted debate regarding their legitimacy and fairness. Reynisdottir et al. (2008) introduced a *public good view* and *user pays view* frameworks to address the justice and fairness issues in NBT contexts. The public good view suggests that natural resources for leisure services should be provided to all citizens only at the expense of tax revenue (Crandall & Driver, 1984). Scholars sharing this view argue that the resources are part of public goods for public welfare, and accordingly charging for user fees evokes perception of unfairness and reduce visitation among economically disadvantaged groups (More & Stevens, 2000; Watson & Herath, 1999). On the other hand, the user pays view suggests that individuals are responsible for paying the appropriate price for using the resources and services provided at the sites. They argue that it is reasonable that following an equity principle, only visitors who incur costs should pay the prices without non-visitors' subsidies. This view also contends that the introduction of user fees will reduce the number of visitors, which in turn can positively mitigate congestion and crowding in natural attractions (Reynisdottir et al., 2008).

Since the late 1990s, quite a few tourism and leisure researchers have revealed the predictors and consequences of user fees in NBT contexts (Fix & Vaske, 2007; Kim & Crompton, 2002; Laarman & Gregersen, 1996; McCarville et al., 1996; Menkhaus & Lober, 1996; Park et al., 2006; Schwartz & Lin, 2006). For example, Laarman and Gregersen (1996) proposed principles and criteria for user fee policy, and argued that pricing is an influential tool for efficiency, fairness, and environmental sustainability in NBT. Menkhaus and Lober (1996) estimated the appropriate entrance/user fee per park based on a travel cost model for valuating price points in protected areas of Costa Rica. McCarville et al. (1996) adapted fairness concepts to examine what determines visitors' responses to fees. They observed that the introduction of user fees is generally perceived unfair by those who have never paid user fees and can also make them feel victimized. They also offered some theoretical direction involving the use of social judgment theory and attribution theory for further research on user fee perceptions in NBT. Kim and Crompton (2002) investigated the impact of several behavioral (e.g. number of visits, level of involvement, degree of loyalty, and ownership of an annual pass) and economic factors (e.g. perceived value for the price and importance of the price) on park entrance fee perceptions, and found that economic factors were more useful predictors of price perceptions than behavioral factors.

More recently, Park et al. (2006) conducted a scenario-based survey of campers and observed that public input (e.g. whether public participation in the decision process of fee level is extensive or not) and fee level were the best predictors of two dependant variables; perceived social equity and fee acceptability. Fix and Vaske (2007) found that the beliefs about fees significantly predict the evaluation of fees, that is, the more likely visitors are to understand the reasons behind the fee program and approve of the fee program, the more likely they are to rate the fees as about right.

2.2. Willingness to pay

Although willingness to pay (WTP) is distinguished from reference price (i.e., what consumers expect to pay) (McCarville & Crompton, 1987), it has often been used to indicate the maximum amount that consumers intend to pay (Kyle, Graefe, & Absher, 2002; Laarman & Gregersen, 1996). In tourism and leisure literature, WTP has been used to estimate the value of non-market goods (Reynisdottir et al., 2008). Accordingly, for non-market valuation such as environmental improvement and natural attractions in NBT contexts, some researchers have used the contingent valuation method to measure WTP (Lee & Han, 2002; Mmopelwa, Kgathi, & Molefhe, 2007; Reynisdottir et al., 2008).

In user fee literature, WTP is one of the frequently used dependent variables, and the various antecedents of WTP have been identified; e.g., environmental concern, past payment history, and some socio-demographic characteristics such as income,

nationality, and education (Reynisdottir et al., 2008). As noted earlier, income level is one of the most widely used predictors of WTP, but the results have been mixed (Garrod & Fyall, 2000; More & Stevens, 2000; Williams et al., 1999). In addition, attitude toward the environment has been found to be a significant predictor of WTP (Carlsson & Johansson-Stenman, 2000). Laarman and Gregersen (1996) also argued that WTP significantly relies on the level of a site's attributes or qualities. For example, a place with special attractions with high scarcity value will result in higher levels of WTP than ordinary places. On the other hand, although attitude toward fee policy or perceived fairness has been considered as one of the important predictors of WTP (Mitchell & Carson, 1989), only a few studies have attempted to reveal their relationships (Ajzen et al., 2000; Schröder & Mieg, 2008).

2.3. Perceived price fairness

Because fairness in a fee or price context initially referred to a psychological perception of what is right or just in a particular setting (Stapel, 1972), quite a few researchers, more recently, have delineated a perceived price fairness concept. Accordingly, price fairness can be defined as "*a consumer's assessment and associated emotions of whether the difference (or lack of difference) between a seller's price and the price of a comparative other party is reasonable, acceptable, or justifiable*" (Xia, Monroe, & Cox, 2004, p. 3). In other words, it is a price evaluation based on the comparison between actual price to reference price, competitors' price, costs, and/or other consumers' price (Kahneman, Knetsch, & Thaler, 1986; Thaler, 1985). It is also noted that price fairness or unfairness is derived by the function of one's reference price and the actual price paid (Monroe, 2003; Petrick, 2005).

McCarville et al. (1996) introduced the fairness concept into a NBT context based on two theoretical frameworks: exchange theory and adaptation level theory. They argued that while fair fees receive little public attention, unfair fees evoke considerable hostility and displacement. With reference to the relationship between fairness and WTP, Ajzen et al. (2000) empirically tested the effects of perceived fairness on WTP for public goods or services including: a university library fund, a community outreach program, and a campus beautification project. They observed that the perceived fairness of the requested payments is positively related to WTP. More recently, Schröder and Mieg (2008) argued that when individuals are asked what amount of money they would be willing to pay for a public good, their response may depend on their perception of justice or fairness (i.e. should I pay for it, or should someone else pay for it more than what I ought to pay?). They also observed that perceived fairness significantly predicted WTP, and that equity-based fairness led to higher WTP than equality-based (Schröder & Mieg, 2008).

Instead of the terms of perceived fairness, a number of leisure and tourism researchers have used the equity concept to address the issue of public leisure and park resources allocation (Buckley, 2003; Crompton & Lamb, 1986; Nyaupane, Graefe, & Burns, 2007; Wicks & Crompton, 1986). Based on the argument that distributive fairness includes three principles such as equity, equality, and need (Deutsch, 1975; Seiders & Berry, 1998), equity and fairness may not be conceptually identical, but according to the fact that the concept of distributive justice is overwhelmingly rooted in equity theory (Adams, 1965), it can be argued that equity and fairness can be used interchangeably. Crompton and Lamb (1986) also argued that equity is substantially related to fairness and justice.

Thus, based on literature review on WTP and price fairness and the study objective 1, the following hypothesis was formulated:

H1. Perceived price fairness is positively related to WTP.

2.4. Spending support

Spending support refers to the extent individuals' support the use of fees, and has been used in various ways: fee purpose (Vogt & Williams, 1999), perceived fee benefits (Williams et al., 1999), and spending preferences (Kyle et al., 2003). Williams et al. (1999) argued that awareness of potential fee benefits (e.g. improving the natural environment, maintaining the quality of the natural attractions, and enhancing the quality of service provided) would positively increase recreationists' response to user fees. They found that perception of fee benefits was the best predictor of support for user fees. Additionally, Vogt and Williams (1999) found that park visitors are more likely to pay user fees when the fee purpose is to maintain the current level of service rather than develop new service programs. Additionally, overnight campers expressed more support for using fees to provide the current level of service than day users. With regard to spending preferences, they identified 12 potential expenditure items and measured the respondents' level of support for the spending of fee revenue. The items were categorized into three dimensions: facilities and services improvement, environmental protection, and environmental education. The findings were consistent with Vogt and Williams' (1999) findings indicating that individuals tend to be more supportive of intended fee purposes including environmental protection and education than they are of facilities improvement. Thus, based on literature review and the study objectives 1 and 2, the following hypotheses were formulated.

H2a. Spending support is positively related to perceived price fairness.

H2b. Spending support is positively related to WTP.

H3. Spending support partially mediates the relationship between perceived price fairness and WTP.

2.5. Place attachment

The study of place meanings, which originated in environmental psychology and human geography, has been applied in the leisure and tourism literature (Williams & Roggenbuck, 1989). While the study of people's attachments to the physical world has driven the development of a variety of concepts (Jorgensen & Stedman, 2001; Low & Altman, 1992; Williams, Patterson, Roggenbuck, & Watson, 1992; Williams & Roggenbuck, 1989), it is generally agreed that those constructs are somewhat mutually overlapped and the relationship between their meanings still remains vague (Hammit & Stewart, 1996). Nonetheless, three major concepts have been frequently used: place attachment, place identity, and place dependence (Kyle & Chick, 2007; Stokols & Shumaker, 1981; Williams & Vaske, 2003).

It has been argued that place attachment is a complex and multifaceted concept worthy of systematic analysis (Kyle & Chick, 2007; Low & Altman, 1992). Low and Altman (1992) used the term of place attachment to describe the affective sentiment people expressed toward landscapes and settings of various scale. Although they indicated that an affective/emotional dimension is central to place attachment, they also noted that place attachment involves interactions with emotional, cognitive, and behavioral modes. Thus, Low and Altman (1992) suggested that place attachment not only represents an affective dimension, but also involves cognition and practice. Some researchers also argued that individuals interact with places in terms of affective, cognitive, and behavioral dimensions (Kianicka, Buchecker, Hunziker, & Muller-Boker, 2006). In addition, they identified four processes associated with the development of place attachment: biological, environmental, psychological, and

sociocultural, which have been extended to major underlying components of place attachment (Farnum, Hall, & Kruger, 2005).

Williams and Roggenbuck (1989) explored the place attachment concept and considered the human–place bond in terms of two components: place identity and place dependence. Proshansky (1978) suggested that place identity involves "*the dimensions of self that define the individual's personal identity in relation to the physical environment by means of a complex pattern of conscious and unconscious ideas, beliefs, preferences, feelings, values, goals, and behavioral tendencies and skills relevant to this environment*" (p. 155). Although the affective dimension is included in the conceptualization, he emphasized that place identity is an individual cognitive structure (Jorgensen & Stedman, 2001; Proshansky, 1978; Proshansky, Fabian, & Kaminoff, 1983).

On the other hand, place dependence is associated with the functions provided by the geographical setting due to its ability to facilitate a desired leisure experience (Williams et al., 1992). Stokols and Shumaker (1981) defined place dependence as "*an occupant's perceived strength of association between him or herself and specific places*" (p. 457). For instance, from a leisure and recreation perspective, place dependence pertains to how much an area is able to provide activities that individuals intend to use and experience (Farnum et al., 2005). More recently, Kyle, Graefe, and Manning (2005) tested the dimensionality of place attachment and revealed that place attachment is composed of three reliable dimensions including: place identity, place dependence, and social bonding. Following from Low and Altman's (1992) suggestion that the meanings ascribed to some setting may be an artifact of the relationships shared in that setting. As such, the developed measures for a third dimension titled social bonding (Kyle et al., 2005).

The study of place attachment explores the meanings people ascribe to the landscape (real or abstract) and their sentiment toward these meaning (Low & Altman, 1992). While the construction of meaning most often involves the complex interaction between the individual, the setting in question, and social worlds of varying scale, it also involves the consumption of place-related media (Kyle & Chick, 2007; Stokowski, 2002). This media, often generated by the host destination, portrays the destination in a favorable manner in order to build sentiment. In this way, few tourists visit destinations without some partially developed notion of the type of setting they are visiting. Consequently, there is often pre-developed attachment; an attachment magnified by their investment of time and financial resources.

Recently, Kyle et al. (2003) tested the moderating effect of place attachment on the relationship between attitudes toward fees and fee spending support. They argued that in recreation and leisure behavior literatures, little has been known about the relationship between place attachment and attitudes toward recreation user fees although it has been frequently reported that psychological attachment is positively correlated with price acceptability in consumer behavior literature. In order to explain the relationship between place attachment and attitudes toward fees, Kyle et al. (2003) adopted Sherif and Hovland's (1961) social judgment theory which postulates that individuals' prior attitudes influence the encoding of attitude relevant information. Based on the conceptual similarity, they regarded place identity as value-relevant information and place dependence as outcome relevant information, and showed that only value-relevant involvement (e.g. place identity) significantly moderate the relationship between recreationists' attitudes toward the fee policy and spending support. Thus, based on literature review and the study objective 3, the following hypothesis was formulated.

H4. Place attachment has a moderating effect on the relationship between perceived price fairness, spending support, and WTP.

3. Methods

3.1. Study purpose

As noted earlier, this study is in an extension of previous research examining the moderating role of place attachment on the relationship between attitudes toward fees and spending preferences (Kyle et al., 2003). In contrast to this earlier work, we adopt a conceptual framework ground in concepts related to justice and fairness (Fig. 1).

Based on literature review and previous empirical evidences, three latent variables (i.e., price fairness, spending support, and place attachment) were proposed as the antecedents of WTP, and the relationships between the variables in the structural model were hypothesized.

3.2. Data collection

Fees were relatively a different way of providing recreation opportunities to the Forest Service – only being given permission by the government since 1997. Consequently, the public was not used to paying for access even at the low rate, and the Forest Service arbitrarily set an initial fee (e.g. $2 a vehicle) without any research to support the price point. Thus, the current study collected data from the Chattahoochee National Forest (CNF) to explore public perceptions of fees and to determine the public's response to the new fee program.

Components of several sampling protocols were utilized to obtain the sample. First, sampling points throughout the Chattahoochee National Forest (CNF) were stratified to reflect the diversity of settings and activities supported by these settings found within the forest. Consequently, sampling occurred at eight sites: two visitor centers, two trailheads, two day-use (primarily picnic and swimming) areas, and two off-road vehicle (ORV) use areas. Sampling occurred over 60 days beginning Memorial Day weekend 2002 through late October 2002. Thus, seven to eight sampling days were dedicated to each site, spread across weekdays and weekends.

An onsite systematic sampling design for sampling respondents was utilized. Sampling occurred between 8:00 am and 6:00 pm in areas situated adjacent to the site's parking lot. Every third visitor was approached to participate in a short interview, lasting approximately three minutes. For groups of more than one, the individual with the most recent birthday was selected. At the conclusion of the interview, researchers requested the respondent's name and addresses to be sent a more extensive mail back survey instrument. Consequently, 1353 useable names and addresses were obtained with 68 refusals. Of this sample, 42 names and addresses were incorrect, which finally led to 1311 valid names and addresses.

The mail back questionnaire was administered using a modified Dillman (2000) procedure: (a) subjects were first sent a survey instrument two weeks following their onsite contact; (b) two weeks following this, a reminder/thank you postcard was sent; (c)

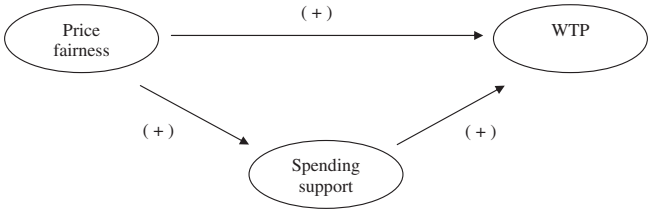

Fig. 1. Hypothesized model.

a second survey instrument was then sent to non-respondents approximately one month following the initial contact; (d) a second reminder/thank you postcard was also sent to non-respondents six weeks following their initial contact; and (e) a third survey instrument was sent to non-respondents approximately two months following their onsite contact (Dillman, 2000). This procedure yielded 562 completed survey instruments (43% response rate).

Although the response rate was consistent with recent trends (Connelly, Brown, & Decker, 2003), it was below the researchers' expectations. Two procedures to explore issues related to non-response bias were used. First, there were several identical items (e.g. previous visitation, time spent onsite, fee attitude questions) that were used in both the onsite and mail back surveys. The responses of non-respondents were compared to those of respondents for both the onsite and mail back questionnaires. Subsequently, no significant differences between respondents and non-respondents were observed.

Second, a follow-up telephone survey of non-respondents was conducted in order to test for potential non-response bias as well as to further explore reasons why respondents had not returned their survey instruments. Respondents' telephone numbers were collected from an internet-based search engine. Fifty telephone interviews were completed (eight respondents refused to be interviewed). The telephone survey lasted approximately three minutes. Questions on the telephone survey examined past visitation, fee-related issues, and visitor demographics. Again, no significant differences between the telephone and mail back samples were found.

When asked why they had not returned their survey instrument, most respondents indicated that they had no time and that the survey instrument was too long. Beyond the length of the survey (12 pages), there was also some redundancy in the survey instrument that was noted by respondents in the open-ended comments at the conclusion of the mail back survey. The redundancy was related to the use of multi-item scales to measure related constructs (e.g. enduring involvement) and fee issues. Some respondents may have grown impatient with the repetitive nature of many of the survey items.

3.3. Measures

Perceived price fairness was measured using four items on a 5-point Likert-type scale where 1 = strongly disagree through 5 = strongly agree. The items reflected the notions of equity and equality, and specifically, included two reverse coded scales: *I think that the Forest Service's fee program is inappropriate* and *Fees are inappropriate because they exclude some visitors*, and also had two other scales: *Fees are a fair way of collecting revenue from those who use the resource the most* and *Fees are fair*.

For *spending support*, subjects were asked to indicate their level of support for spending fee revenue for 10 items which were adapted from previous literature (Kyle et al., 2003). The items were measured using a 5-point scale where 1 = strongly oppose through 5 = strongly support. Items measuring *spending support* were categorized and parceled into three dimensions; facilities and services, environmental protection, and environmental education. The items for facilities and services included *improve visitor services through the extension of visitor center hours and expansion of informational resources*, *increase the maintenance of restrooms, exhibits, facilities and trails to provide a higher quality visitor experience*, and *update and expand written materials, handouts, and maps*.

For environmental protection, items included: *increase resource protection through visible ranger patrols within the Forest*, *support completion of ongoing flora and fauna restoration projects*, *develop additional onsite protection (e.g., fencing, trail definition, boardwalks)*, and *implement user-impact monitoring program for recreational and other area uses*.

Lastly, environmental education was measured using: *increase funding for National Forest interpretive and environmental education programs*, *design and install interpretive exhibits throughout Chattahoochee National Forest*, and *develop interpretive media, highlighting habitat restoration and species reintroduction projects, that includes video, exhibits, and environmental education curricula*.

Willingness to pay (WTP) was measured by asking respondents their maximum WTP for 6 different types of user fees: *parking fees at visitor centers, parking fees at trailheads, camping, program fees for interpretive talks and walks, swimming, and mountain biking*. This WTP question format was drawn from previous studies using contingent valuation methods (Kyle et al., 2002; Richer & Christensen, 1999).

Place attachment was conceptualized in terms of two dimensions including place identity and place dependence (Kyle et al., 2005). Place identity was measured using eight items and place dependence was measured with three items.

4. Results

4.1. Descriptive analysis

As shown in Table 1, more than half of respondents were male (58.4%). Most respondents were middle-aged (M = 44.9, S.D. = 13.29), White (95.5%), and educated with some college or graduate school (65.9%). In terms of household income, over one half of respondents indicated living in households with incomes ranging from $20,000 to $79,999 (55.3%).

As displayed in Table 2, both dimensions measured displayed high reliability coefficients (Cronbach's alpha = .927 and .873, respectively).

To examine the moderating effect of the place attachment dimensions on the relationships tested in our hypothesized model, data were divided into high and low groups for each factor using their median (i.e., 3.12 for *place identity* and 3.00 for *place dependence*). As a result, high (n = 273) and low (n = 265) place identity

Table 1
Respondents profiles.

Characteristics	N	%
Gender (n = 529)		
Male	309	58.4
Female	220	41.6
Age (mean = 44.9, S.D. = 13.29)		
Household income (n = 489)		
Less than $20,000	25	5.1
$20,000–$39,999	79	16.2
$40,000–$59,999	108	22.1
$60,000–$79,999	83	17.0
$80,000–$99,999	61	12.5
$100,000–$119,999	60	12.3
$120,000–$139,999	26	5.3
$140,000–$159,999	21	4.3
$160,000 to more	26	5.3
Education (n = 528)		
High school or less	68	12.9
Some college or graduate school	348	65.9
Post graduate school	112	21.2
Ethnicity (n = 523)		
Black or African American	8	1.5
Asian American	9	1.7
White	499	95.5
American Indian or Alaskan Native	7	1.3

Table 2
Place attachment.

Items	α	M	S.D.
Place identity (mean = 3.18, median = 3.12)	.927		
I am very attached to this Forest		3.46	.94
I feel a strong sense of belonging to this Forest		3.19	.96
I feel the Chattahoochee National Forest is a part of me		2.98	.97
I have little, if any, emotional attachment to the Chattahoochee National Forest		3.19	1.07
I identify strongly with this Forest		3.17	.92
The Chattahoochee National Forest means more to me than any other forest I can think of		2.64	1.03
This Forest means a lot to me		3.57	.87
Visiting the Chattahoochee National Forest says a lot about who I am		3.22	.93
Place dependence (mean = 3.23, median = 3.00)	.873		
For the recreation activities that I enjoy, the Chattahoochee National Forest is the best place		3.39	.85
I can't imagine a better place for what I like to do		3.19	.97
I enjoy visiting the Chattahoochee National Forest more than any other forest		3.13	.93

groups and high (n = 236) and low (n = 300) place dependence groups were generated. Our hypothesized model was tested among these place groups.

4.2. Two-step approach

The hypothesized model was tested using a two-step approach beginning with the testing of the measurement and then the structural models using the pooled sample (Anderson & Gerbing, 1988). The adequacy of the measurement model was examined using a confirmatory factor analysis (CFA) in LISREL 8.80. The results of the CFA in Table 3 demonstrate that all scale items were significant (t-value ranging from 12.89 to 19.60) and had adequate factor loadings (λ ranging from .56 to .84).

Following the testing of the measurement model, the structural model was tested. As shown in Table 4, while the two models' χ^2 (242.868, df = 59; 277.528, df = 60) were statistically significant, other goodness of fit indices indicated a satisfactory model fit

Table 3
Confirmatory factor analysis.

Items	M	S.D.	λ	t-Value
Perceived fairness[a]				
I think that the Forest Service's fee program is inappropriate (reverse coded)	4.05	.85	.76	–
Fees are inappropriate because they exclude some visitors (reverse coded)	4.01	.86	.56	14.71
Fees are a fair way of collecting revenue from those who use the resource the most	3.97	.78	.62	12.89
Fees are fair	3.98	.79	.82	14.36
Spending support				
Facilities and services	3.66	.58	.77	–
Environmental protection	3.72	.58	.74	15.25
Environmental education	3.41	.73	.79	15.55
Willingness to pay (WTP)				
Parking fees at visitor centers	3.56	2.04	.70	–
Parking fees at trailheads	2.92	1.92	.67	19.60
Program fees for interpretive talks and walks	3.64	2.44	.78	16.62
Camping	7.32	4.33	.62	13.46
Swimming	3.15	2.22	.84	17.67
Mountain biking	4.24	2.71	.77	16.44

[a] The items were measured on a 5-point Likert scale where 1 = strongly disagree through 5 = strongly agree.

Table 4
Summary of model testing.

Model	χ^2	df	RMSEA	NNFI	CFI
Measurement model[a]	242.868	59	.072	.96	.97
Structural model	277.528	60	.077	.95	.96

[a] According to inspection of the modification indices, error terms (i.e. ε1 ↔ ε2, ε8 ↔ ε9, and ε9 ↔ ε13) with the observed measures were allowed to be correlated.

(RMSEA < .08) and a good model fit (NNFI and CFI > .95) (Brown & Cudeck, 1993; Hu & Bentler, 1999).

The test of the structural model (using the pooled sample) offered support for the hypothesized model. To examine the moderating effect of place identity and place dependence on the relationships tested in the model, multiple-group invariance testing was used to compare two (high and low) groups in each model (Model 1 – place identity, Model 2 – place dependence) (Bollen, 1989; Bryne, 1998). As seen in Table 5, the invariance test for Model 1 examined whether or not two groups (high place identity vs. low place identity) had the same factor structure (A), pattern of factor loadings (B), and structural path coefficients (C).

In sum, using the chi-square difference test to detect matrix inequality, we observed that one factor loading (i.e., *environmental education*) varied among groups in addition to the structural path from fairness → spending support. The χ^2 difference test indicated a significantly worse fit after holding factor loadings as invariant across the groups. Therefore, equality constraints were imposed on each factor loading, and subsequently, the final model (B_a) was obtained with a good model fit (RMSEA = .070, NNFI = .96, CFI = .97). Finally, the invariance test for structural paths of the model (C) indicated that the equality constraints significantly impaired fit ($\Delta\chi^2 = 10.86$, $\Delta df = 3$). Subsequent independent testing of each element within the beta matrix produced the final model (C_a) indicating that one structural path (fairness → spending support) needed to be freely estimated across the high and low place identity groups.

Thus, for Model 1 which involved the testing of place identity's moderating effect, perceived fairness (β = .34, t = 6.41) and spending support (β = .19, t = 3.78) were found to positively influence WTP for both groups. However, while the relationship between perceived fairness and spending support was not statistically significant (p < .05) in the high place identity group (β = .03, t = .42), it was significant in the low place identity group (β = .38, t = 5.51). R^2 value in Model 1 was .136 in the high place identity group and .235 in the low group, respectively.

The invariance test for Model 2 (Place dependence) was also conducted (Table 6). The results of the test differed from the test for Model 1, that is, the constrained models (B and C) in Model 2 did not impair model fit. All parameters (i.e., factor loadings and beta/gamma coefficients) were held constant across the high and low place dependence groups. Additionally, all path coefficients in

Table 5
Summary of invariance test – Model 1 – place identity.

Model 1	χ^2	df	$\Delta\chi^2$	Δdf	RMSEA	NNFI	CFI
A (Factor structure)	301.342	118			.073	.96	.97
B (Factor loading)	325.788**	128	24.45	10	.074	.95	.96
B_a (Final)[a]	309.643	127			.070	.96	.97
C (Structural paths)	320.504*	130	10.86	3	.072	.96	.96
C_a (Final)[b]	310.476	129			.070	.96	.97

*p < .05, ** p < .01.
[a] The following parameter was permitted to be freely estimated across both groups: factor loading – λ_{72} (environmental education).
[b] The following regression path was permitted to be freely estimated across both groups: "fairness → spending support" (β_{21}).

Table 6
Summary of invariance test (Model 2 − place dependence).

Model 2	χ^2	df	$\Delta\chi^2$	Δdf	RMSEA	NNFI	CFI
A (Factor structure)	309.277	118			.074	.95	.96
B (Factor loading)	319.036	128	9.76	10	.071	.96	.96
C (Structural paths)	320.466	131	1.43	3	.070	.96	.96

Model 2 were statistically significant ($p < .05$). Perceived fairness was found to positively influence spending support ($\beta = .23$, $t = 4.40$) and WTP ($\beta = .32$, $t = 5.88$) for both groups, and spending support also was positively related to WTP ($\beta = .16$, $t = 3.21$) for both groups. R^2 value in Model 2 was .132 in the high place dependence group and .171 in the low group, respectively.

4.3. t-Test

In addition, an independent-samples t-test was conducted to compare spending support for the high and low place identity groups. There were significant differences in all three dimensions of spending support. Specifically, for facilities and services, the high place identity group (mean = 3.73, S.D. = .59) was significantly more likely to support spending than the low group (mean = 3.56, S.D. = .53; $t(536) = -3.42$, $p < .01$); for environmental protection, the high group (mean = 3.77, S.D. = .57) significantly tended to support spending more than the low group (mean = 3.64, S.D. = .54; $t(536) = -2.64$, $p < .01$); and for environmental education, the high group (mean = 3.46, S.D. = .74) was significantly more likely to support spending more than the low group (mean = 3.34, S.D. = .68; $t(536) = -2.04$, $p < .05$). The results also showed that, for both groups, spending support for environmental education was slightly lower than other supports for facilities and environmental protection. However, regardless of the statistically significant results, it could be argued that the small difference in the means needs to be carefully examined because of the large sample size.

5. Discussion and conclusions

In this paper, we attempted to identify the antecedents of willingness to pay (WTP) user fees from fairness perspectives (Ajzen et al., 2000; McCarville et al., 1996; Schröder & Mieg, 2008). Accordingly, our hypothesized model was developed on the basis of a previous work. Multiple-group invariance testing was conducted to examine the moderating role of place attachment in the relationships tested in our model. Our findings offered support for our hypothesized model. We observed a positive and significant linear relationship between perceived price fairness, spending support, and WTP (i.e., H1, H2a, and H2b were supported). Because the direct path from price fairness to WTP decreased after spending support was included in the model from $\beta = .36$ to $\beta = .32$ (both were significant at $p < .05$) (Baron & Kenny, 1986), H3 was also supported; i.e., spending support had a partial mediating role in relation to perceived price fairness and WTP. In other words, as individuals perceive that the user fees in the NBT context are fair, they are more likely to support spending fee revenue in targeted areas, thereby improving facilities and visitor services, increasing environmental protection, and developing interpretive and environmental education programs. Thus, perceived fairness and spending in areas aligned with respondents' preferences were found to increase the likelihood of respondents' WTP user fees.

With reference to the moderating effect of place attachment on the relationships tested in our model, there were mixed findings. While place identity was found to have a significant moderating role on the relationships between perceived price fairness and spending support, place dependence had no significant moderating role in the relationships. Therefore, H4 resulted in mixed finding. Respondents' perceptions of price fairness positively influenced their support for spending fee revenue regardless of the degree of place dependence, whereas, fairness significantly and positively influenced fee spending support only for people who had low place identity. For visitors scoring high on the place identity dimension, there was no significant association between price fairness and spending support. Thus, based on the results showing that high place identity group were more likely to support fee spending than low group, it could be argued that those who were emotionally attached to the place tend to support fee spending regardless of their degree of user fees fairness.

People scoring high on the place identity dimension of place attachment were more inclined to consider the fee program fair (mean = 4.07, S.D. = .63) compared to those with low levels of place identity (mean = 3.93, S.D. = .69; $t(536) = -2.54$, $p < .05$). This result was not consistent with findings reported by McCarville et al. (1996) who observed that visitors who lived closest to recreational sites were more likely to be distressed by user fees. The discrepancy between this and previous work was possibly a consequence of CNF visitors with higher tolerance of user fees, whereas those in McCarville et al.'s (1996) study were not. This argument is plausible because the context of McCarville et al. (1996)'s study was first-time fees, and the findings were reported in 1996 when the Fee Demonstration Program was initially established in the U.S. The fact that those scoring high on place identity had visited the CNF (mean = 13.16) significantly more often than those scoring low on the place identity (mean = 8.3; $t(390) = -4.59$, $p < .01$) also supports this interpretation.

As discussed earlier, while place identity examines people's emotional ties to place (Proshansky, 1978; Williams et al., 1992), place dependence examines people's functional meanings (i.e., whether it is a right place to undertake a particular activity) (Farnum et al., 2005; Stokols & Shumaker, 1981; Williams et al., 1992). It could be therefore argued that affective-based place identity influences respondents' perceived fairness regarding user fees, whereas place dependence does not. In addition, t-tests showed that the degree of place identity magnifies the spending support for fees paid. The high place identity group was more likely to support spending than the low place identity group in terms of all three dimensions: environmental protection, environmental education, and facilities/services development.

The results related to the effect of place attachment is also consistent with Kyle et al.'s (2003) work examining the relationship between attitudes toward user fees and spending preferences based on social judgment theory (Sherif & Hovland, 1961). Their findings supported the hypotheses that decisions falling within individuals' latitude of acceptance are likely to be supported, and decisions falling beyond their latitude of non-commitment or rejection are likely to be denied. They observed that place identity magnifies the relationship between national park visitors' attitudes toward the fee program and spending support, whereas place dependence, does not have a significant moderating effect on the relationship between attitudes and spending support (Kyle et al., 2003).

Arguably, charging user fees in a NBT has been implemented as an efficient revenue source for public leisure services and as an effective visitor management tool. Although some research has argued that the introduction of fees has reduced the numbers of NBT visitors (Schwartz & Lin, 2006), it is also true that many researchers have observed the benefits of user fees from managerial and/or environmental perspectives (Garrod & Fyall, 2000; Laarman & Gregersen, 1996).

This study also provides some practical implications for managers and policymakers in the NBT field. As illustrated in these

findings, individuals with high price fairness are inclined to support fee spending, which in turn increases their WTP. Therefore, it is important to make a user fees policy fair and transparent based on the notions of justice and equity. Additionally, the clarification of fee charging purposes and/or the disclosure of fee revenue expenditures should enhance fee-payers' trust in the program and increase their willingness to support fee programs. Accordingly, the efforts to clearly deliver the purposes and spending procedures of user fees should be made on information and communication channel to tourists (e.g., brochure, visitor guide, website, and/or newsletter). This study also investigated the relationship between individuals' psychological dimensions (e.g. fairness, spending preferences, place attachment) and their intentions instead of relying on socio-demographic variables (e.g. income level) for understanding WTP user fees. Thus, rather than examining the relationship between income level and visitation, an understanding of nature-based tourists' psychological responses to user fees is believed to contribute NBT sites to designing and managing consumer-centric fee policy. Laarman and Gregersen (1996) noted that "*pricing is a potentially powerful tool to move towards greater efficiency, fairness, and environmentally sustainable NBT*" (p. 253).

However, this study is not without limitations. Despite that a stratified and onsite systematic sampling was conducted, the generalization of the results from one national forest to others needs to be carefully done. Particularly, the attitude of visitors to a national forest may be changed if they are aware of or even get used to the price structure and policy over the given period at a certain site. Thus, when the current study results are applied in the fees policy, it may be considered the fact that the data were collected a couple of years ago. In addition, coverage error could be another limitation in this study. That is, this study used only users of Chattahoochee National Forest, and it could be possible that non-users, who may be significantly impacted by user fees and also may have compelling views on perceived price fairness and spending support, show different results. A priority for future research is to examine relationships among these variables among non-user populations.

Finally, these findings point to several additional areas for further research. First, the concept of price fairness could be more delineated. Although this study operationally defined the fairness concept as a uni-dimensional variable, a multi-dimensional conceptualization of fairness could also be used. For example, as the definition implies, price fairness could be divided into distributive and procedural price fairness (Xia et al., 2004). While distributive fairness represents the perception of fee outcomes based on equity, equality, and/or need (Adams, 1965; Wicks & Crompton, 1986), procedural fairness emphasizes the fee setting process (Lind & Tyler, 1988). Also, in addition to willingness to pay, appropriate price (AP) could be studied. AP refers to the amount visitors consider appropriate for experiences and services. Previous studies have revealed that although individuals tend to provide WTP estimates that are greater than their AP estimates, the two concepts are strongly correlated with each other (Kyle et al., 2002; Richer & Christensen, 1999). Thus, it is believed that the application of AP concept instead of WTP for user fee research could provide further theoretical and practical implications. It is also expected that the further research adding other factors (e.g. age, income level, visitation frequency, and user types), which were beyond the scope and purposes of this study, could bring another meaningful findings.

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