



A cognitive appraisal theory perspective of residents' support for tourism

Ian E. Munanura^a, Javier A. Parada^b and Jeffrey D. Kline^c

^aDepartment of Forest Ecosystems and Society, Oregon State University, Corvallis, OR, USA; ^bGlobal Marketing Services, Travel Oregon, Portland, OR, USA; ^cUSDA Forest Service, Pacific Northwest Research Station, Corvallis, OR, USA

ABSTRACT

Research on residents' attitudes toward tourism suggests an exchange relationship between perceived tourism impact and support among residents. However, there is limited knowledge about the cognitive processes through which such a relationship occurs. This study demonstrates the potential utility of integrating cognitive appraisal and social exchange theories to explain the cognitive process linking perceived tourism impact, quality of life, and residents' support for tourism. We used a survey of residents of Klamath and Linn Counties in the state of Oregon, United States, to obtain data from a random sample of 782 respondents. Using a structural equation modeling approach, we tested three competing theoretical models: the social exchange baseline model, the cognitive appraisal model, and a model integrating both theories. Results suggest that conceptual integration of social exchange and cognitive appraisal theories potentially improves the prediction of residents' support for tourism. Results also suggest that positive tourism attributes and positive affective emotions can play vital roles in the cognitive processes determining residents' support for tourism. We discuss the implications of these findings for future tourism research.

ARTICLE HISTORY

Received 21 April 2022
Accepted 22 March 2023

KEYWORDS

Perceived tourism impact; cognitive appraisal; support for tourism; wellbeing; affective emotions

Introduction

The support of residents in tourist-host communities is essential for effective planning, management, and the sustainability of ecotourism or any type of tourism (Garrod, 2003; Palmer & Chuamuangphan, 2018). Historically, tourism research typically has examined residents' support for tourism development from a social exchange theory (SET) perspective (Jurowski & Gursoy, 2004; McGehee & Andereck, 2004; Perdue et al., 1990; Woo et al., 2015). The SET perspective suggests that social behavior results from an exchange process aiming to optimize benefit and minimize harm (Homans, 1958, cited in Boley et al., 2014). Studies applying SET to understand residents' support for tourism argue that perceived tourism impacts determine support for tourism (Boley et al., 2014; Munanura et al., 2021; Nunkoo & Ramkissoon, 2011; Woosnam, 2012). Arguably, when residents perceive tourism negatively, they tend to resent it, making the future of tourism uncertain or unsustainable (Sharpley, 2014). In contrast, positive perceptions of

tourism are likely to enhance the support of tourism among residents, which arguably eases and facilitates planning and management of sustainable tourism (Sharpley, 2014).

However, application of SET has sometimes been criticized for not fully explaining residents' support for tourism (e.g. Boley et al., 2014; Nunkoo & Ramkissoon, 2011; Sharpley, 2014). Some studies addressing this knowledge gap have argued that quality of life conditions also play a role in the SET relationship between perceived tourism impacts and tourism support (Nunkoo & So, 2016; Woo et al., 2015). But the integration of the quality of life in SET research models has been inconsistent, likely due to the absence of an overarching theoretical framework that formally integrates quality of life in the SET process. For example, studies have considered the quality of life as an antecedent of perceived tourism impacts in models predicting support for tourism (e.g. Boley et al., 2014). In contrast, studies also suggest that quality of life is a function of perceived tourism impact (e.g., Kim et al., 2013; Nunkoo & So, 2016). This incongruence in knowledge about the role of quality of life in the formation of tourism attitudes suggests the need for an overarching theoretical framework that combines the quality of life and SET research models into an integrated whole.

We attempted to address this knowledge gap by examining the utility of cognitive appraisal theory (CAT) in explaining the mental processes linking perceived tourism impact to tourism support. CAT postulates that the impacts of an event or encounter on an individual elicit an appraisal process through which an individual evaluates the effects of the event on quality of life. These, in turn, create emotions that trigger self-efficacy behavioral responses aimed at maintaining positive effects or reducing negative effects of the appraised event (Smith & Lazarus, 1993). According to CAT, the initial stage of the social exchange process involving an individual's judgment of tourism impact on quality of life represents the primary appraisal process. The primary appraisal then results in emotions (positive or negative) that shape residents' support for tourism – referred by CAT as the secondary appraisal process – which produces self-efficacy behavioral response aimed at preserving the tourism benefits identified in the primary appraisal of tourism impact. In this way, CAT links quality of life to perceived tourism impact addressed in the social exchange process determining support for tourism. Building on relatively recent research that has introduced CAT to tourism attitudinal studies (Lai et al., 2021; Munanura et al., 2021; Ouyang et al., 2017), we sought to empirically demonstrate, using data from Oregon in the United States, that support for tourism is a product of a cognitive process involving judgment of how tourism is perceived by residents to impact the quality of life.

Theoretical background

Residents' support for tourism (SET perspective)

SET is a sociological theory explaining the exchange of resources through the interaction of people (Ap, 1992). Arguably, SET explains peoples' resource exchange (Sharpley, 2014). In tourism attitudinal studies, SET has become a conceptual foundation through which perceived tourism impacts (positive or negative) are associated with residents' support for tourism (Ward & Berno, 2011). Perdue et al. (1987) and Perdue et al. (1990) were among the first tourism scholars to explore a social exchange relationship

between the perceived tourism impacts and the desirability of new tourism development. Since then, several studies have examined the relationship between perceived tourism impact to support for tourism from a social exchange theory perspective (e.g., Boley et al., 2014; Nunkoo & Gursoy, 2012; Nunkoo & So, 2016; Woo et al., 2015). These studies generally conclude that perceived positive tourism impacts (e.g., improved road infrastructure, job creation) and negative impacts (e.g., increased vehicle traffic, pollution) strongly predict residents' support for tourism. According to the SET perspective, residents who perceive tourism impact positively (e.g., residents who believe tourism creates jobs in their community) are more likely to support tourism (Nunkoo & Ramkissoon, 2011). However, residents who perceive tourism impact negatively (e.g., residents who believe tourism has polluted their community) are less likely to support tourism (Nunkoo & Ramkissoon, 2011). Therefore, based on SET and the above discussion, we propose a baseline model of residents' support for tourism (Figure 1a) and our hypothesis one as:

Hypothesis 1(H1): Perceived tourism impact will predict support for tourism. Positively perceived tourism impact will relate to greater support for tourism (H1a), whereas negatively perceived tourism impact will be related to less support for tourism (H1a)

Despite the extensive application of SET in conceptually framing studies that examine residents' support for tourism, SET has been criticized for its inability to explain

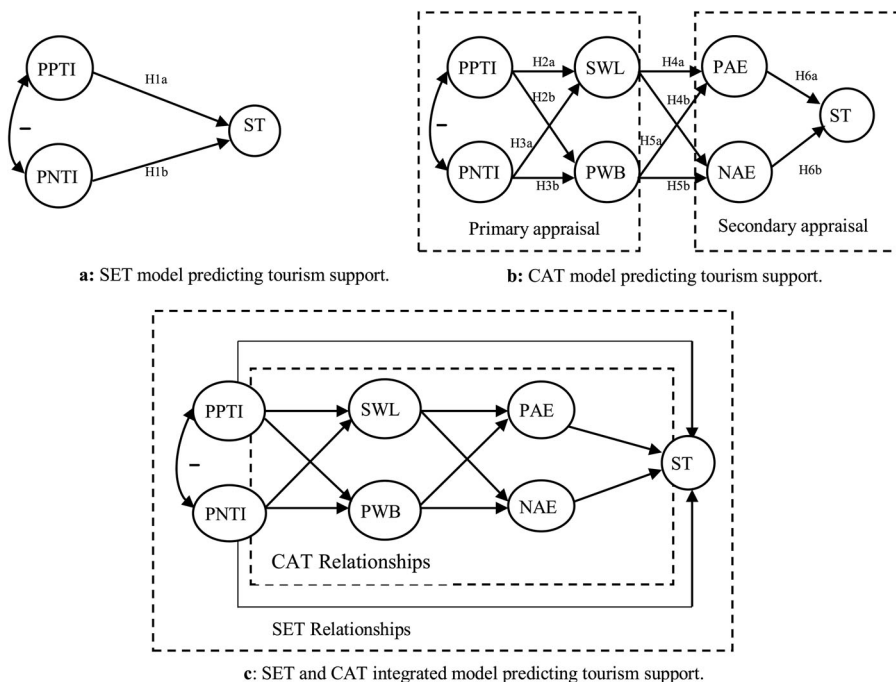


Figure 1. Research model integrating SET and CAT in a social exchange process predicting tourism support.

Note: PPTI = perceived positive tourism impact, PNPI = perceived negative tourism impact, SWL = satisfaction with life, PWB = psychological wellbeing, PAE = positive affect emotions, NAE = negative affect emotions, ST = support for tourism, H1a = hypothesis #1a.

residents' support for tourism more fully (e.g., Nunkoo & So, 2016; Sharpley, 2014). Studies have argued that the application of SET is conceptually fragmented due to the inability to bring together various aspects of the social exchange process (e.g., quality of life) (Nunkoo & So, 2016). For example, studies have considered quality of life as an antecedent of perceived tourism impacts in models predicting support for tourism (e.g., Boley et al., 2014). In contrast, studies have also suggested that quality of life mediates the relationship between perceived tourism impacts and residents' support for tourism (e.g., Kim et al., 2013; Munanura et al., 2021; Nunkoo & So, 2016). This incongruence in knowledge about the role of quality of life in the tourism social exchange process illustrates conceptual fragmentation of social exchange aspects explaining support for tourism, and thus a need for an overarching theoretical framework integrating quality of life in SET research models.

Studies that try to fill this knowledge gap by combining SET with other theories are noteworthy. Some studies, such as Kim et al. (2013) and Woo et al. (2015), have used the bottom-up spillover theory to show how the quality-of-life concept acts as a bridge between the effects of tourism and support for tourism. According to this theoretical orientation, if locals believe tourism is improving their quality of life, they are more likely to support it. In this way, the relationship between the perceived impact of tourism and support for it is mediated by how people feel about their quality of life. Similarly, Boley et al. (2014) used SET and Weber's theory of formal and substantive rationality to show that people's opinions about tourism and their willingness to support it are determined by how they see its economic and non-economic benefits. This conceptual orientation assumes that perceptions of the benefits of tourism to one's own quality of life influence perceptions and motivations about tourism. There are traces of this thesis in older literature (e.g., see McGehee & Andereck, 2004). In other studies, emotion theories have been included to explain tourism sentiments. For instance, studies (e.g., Woosnam, 2012; Woosnam et al., 2009; Woosnam & Aleshinloye, 2013) have hypothesized that how residents emotionally feel about travelers and tourism influences their perceptions of the impact of tourism and their intention to support it. These studies contend that judgments of the impact of tourism and intentions to support it are preceded by emotional feelings toward visitors and tourism generally. Together, these previous studies illustrate conceptual inconsistencies in our understanding of how socio-psychological factors influence residents' support for tourism.

We propose integrating SET and CAT conceptually in a research model relating quality of life variables, including affective feelings, to perceived tourism impacts and residents' support for tourism. We feel that CAT offers the potential for helping to augment SET in explaining support for tourism. We test this potential by considering the use of CAT separately (Figure 1b) and jointly as integrated with SET (Figure 1c). Recent studies have demonstrated that CAT can enable incorporating elements of the social exchange process to predict residents' support for tourism (e.g., Munanura et al., 2020; Ouyang et al., 2017).

Residents' support for tourism: a cognitive appraisal theory perspective

Research literature linking residents' emotions to their support for tourism is growing (Erul et al., 2020; Munanura et al., 2021; Ouyang et al., 2017; Phuc & Nguyen, 2023;

Woosnam, 2012). Arguably, positive, or negative emotions concerning tourism play a role in predicting residents' support for tourism (Ouyang et al., 2017). According to CAT, emotions are outcomes of a mental judgment or evaluation of how a stimulus (e.g., tourism) harms or benefits an individual's quality of life (Lazarus, 1991). Smith and Lazarus (1993) suggest that emotions emerging from a mental judgment process trigger an adaptive behavior, such as responding positively about tourism development and growth. CAT then concerns itself with both the appraisal process and the outcome of this process (Lazarus & Folkman, 1984). Therefore, CAT provides an integrative conceptual framework for explaining antecedents of emotions (e.g., perceived tourism impact on quality of life) and consequences of emotions (e.g., the impact of emotions on residents' support for tourism). Despite CAT's potential to explain residents' support for tourism, empirical studies on tourism support framed using CAT are limited. Ma et al. (2017), alongside other relatively recent studies (Lai et al., 2021; Munanura et al., 2021; Ouyang et al., 2017; Zheng et al., 2019), address a gap in the research literature by empirically examining the utility of CAT in explaining the residents support for tourism.

According to cognitive psychologists (e.g., Lazarus & Folkman, 1984), the cognitive appraisal process comprises primary and secondary appraisal. Primary appraisal is the initial stage of evaluating what is at stake. That is, whether an encounter or event experienced by an individual leads to beneficial or costly quality of life outcomes (Lazarus & Folkman, 1984). Arguably, the nature of the quality-of-life outcome (e.g., positive, or negative) from the initial appraisal leads to an emotional outcome that is either positive (e.g., joyfulness) or negative (e.g., sadness) (Watson & Spence, 2007). According to CAT, the emerging emotions from the primary appraisal state trigger an individual's adaptive behavioral response aimed at sustaining the quality-of-life benefits of an event appraised (Watson & Spence, 2007). Secondary appraisal represents an efficacy-orientation and is an adaptive behavioral response aimed at preserving the quality-of-life benefits or overcoming the quality-of-life costs identified during primary appraisal (Watson & Spence, 2007). In the tourism context, primary appraisal represents a mental evaluation of how tourism is perceived to impact one's quality of life (see hypotheses 2 and 3 in Figure 1b), eliciting positive or negative emotions (see hypotheses 4 and 5 in Figure 1b). The secondary appraisal represents the adaptive behavioral response to support tourism or not (see hypothesis 6 in Figure 1b), based on whether one feels positively or negatively about how tourism is perceived to impact their quality of life (see hypothesis 5).

The primary appraisal, as shown earlier, integrates quality of life into the mental judgment of how an event, such as tourism, impacts people. However, the conceptualization of quality of life in attitudinal studies of tourism is fragmented (Uysal et al., 2016). Most studies integrating quality of life into SET models to explain support for tourism (e.g., Nunkoo & So, 2016) have conceptualized quality of life from a subjective perspective – specifically as 'satisfaction with the quality of life' (Uysal et al., 2016). The subjective conceptualization of the role of perceived quality of life in tourism is supported in existing literature (see Andereck & Nyaupane, 2011; Nunkoo & So, 2016). These studies illustrate that the intangible aspects of quality of life play (e.g., perceived satisfaction with the quality of life) plan a role in the social exchange process predicting support for tourism. According to Diener (2012), an individual's satisfaction with life represents the individual's cognitive evaluation of quality of life. Therefore, satisfaction with life likely plays an

essential role in the primary appraisal of how tourism impacts the quality of life. The use of satisfaction with life as a proxy measurement for the quality-of-life concept is supported by the Organization for Economic Cooperation and Development (OECD, 2013) argument that satisfaction with quality of life represents the global assessment of quality of life.

However, according to human development literature (Diener et al., 1999, 2010; OECD, 2013), subjective perception of quality of life involves three important dimensions; how a person evaluates life overall (e.g., satisfaction with life), affective emotions (e.g., happiness or sadness), and psychological wellbeing (e.g., feelings that life is worthwhile and purposeful). These aspects of perceived quality of life arguably are complementary, as it has been argued, for example, that quality of life conditions would not be satisfactory when one is depressed or unhappy (OECD, 2013). According to CAT, however, affective emotions are likely outcomes of how much an individual is satisfied with life overall (i.e. satisfaction with life) and how purposeful they perceive their life to be (i.e., psychological wellbeing). Therefore, based on CAT and the above discussion, competing models of residents' support for tourism (Figure 1b and c) and hypotheses two, three, four, five, and six are proposed:

Hypothesis 2: Perceived positive tourism impacts positively predict the perceived quality of life. Perceived positive tourism impacts will increase satisfaction with life feelings (H2a) and psychological wellbeing (H2b).

Hypothesis 3: Perceived negative tourism impacts negatively predict the perceived quality of life. Perceived negative tourism impacts will decrease satisfaction with life feelings (H3a) and psychological wellbeing (H3b).

Hypothesis 4: Perceived satisfaction with life predicts affective emotions. Increased satisfaction with life will increase positive affective emotions (H4a), and reduced satisfaction with life will increase negative affective emotions (H4b).

Hypothesis 5: Perceived psychological wellbeing predicts affective emotions. Increased psychological wellbeing will increase positive affective emotions (H5a) and reduced psychological wellbeing will increase negative affective emotions (H5b).

Hypothesis 6: Affective emotions predict support for tourism. Positive affective emotions will increase residents' support for tourism (H6a), and negative affective emotions will reduce residents' support for tourism (H6b).

We test each of these hypotheses in the foregoing empirical analysis.

Methods

Study area

We examined tourism attitudes in Linn and Klamath Counties in Oregon, United States (Figure 2). Linn County is in the Willamette Valley of western Oregon, about 70 miles south of the City of Portland, and 60 miles east of the Pacific Ocean. It is surrounded by three rivers: Willamette, Santiam, and North Santiam. Linn County has 2,297 square miles of land, and about 68% (1570 square miles) is forestland (Palmer et al., 2018). It has a population of nearly 130,000 people (U.S. Census Bureau). Klamath County is in southern-central Oregon, bordering Northern California. It is one of

Oregon's largest counties, comprising 6,135 square miles, and has a population of over 68,000, according to the U.S. Census Bureau. Historically, residents in these counties and elsewhere in Oregon have relied on harvesting and using forest commodities for a significant share of their economic activity and livelihoods (Kelly & Bliss, 2009).

Recently, the State of Oregon has begun to advocate nature-based tourism as one way to help revitalize rural communities (Dean Runyan Associates, 2019) following long-term timber industry declines (Andrews & Kutara, 2005). The Oregon Tourism Commission has led efforts to reposition the State of Oregon as a competitive tourism destination expected to generate economic growth opportunities to replace those lost with declines in timber industries. Advocates argue that tourism offers Oregon opportunities to rejuvenate rural economies by providing jobs and revenue for local businesses (Dean Runyan Associates, 2019). This seeming potential for tourism to revive the rural economies affected by the loss of timber industries is evident. For example, while employment in the timber industry reduced by about ten percent in Oregon since 2007, employment in tourism has increased by almost twenty percent (Dean Runyan Associates, 2019). Similarly, tourism revenue and jobs in Klamath county have been growing annually at an average rate of 4.4percent and 3.3percent since 2007 (Dean Runyan Associates, 2019). In Linn County, tourism revenue and jobs have increased at an annual average of about 6.4percent and 3.1percent (Dean Runyan Associates, 2019). These data suggest the potential value of tourism for the State of Oregon and the need to understand better potential factors affecting residents' support for tourism.

Sample and data collection

We used a mail survey to gather data about residents' tourism attitudes from a random sample of 782 respondents, including 352 from Klamath county and 430 from Linn County. The sample from Klamath County represents a response rate of thirty-one percent, and the sample in Linn County represents a response rate of seventeen percent. The total sample size was 721 respondents, excluding 61 incomplete cases. A random sample of addresses was obtained from a commercial vendor and included city-style addresses, rural route addresses, highway contracts, and P.O. Box addresses. Extensive coverage of diverse address categories allowed us to minimize potential coverage error in sampling (Dillman et al., 2014). The sampling process excluded seasonal, educational, and vacant residential addresses.

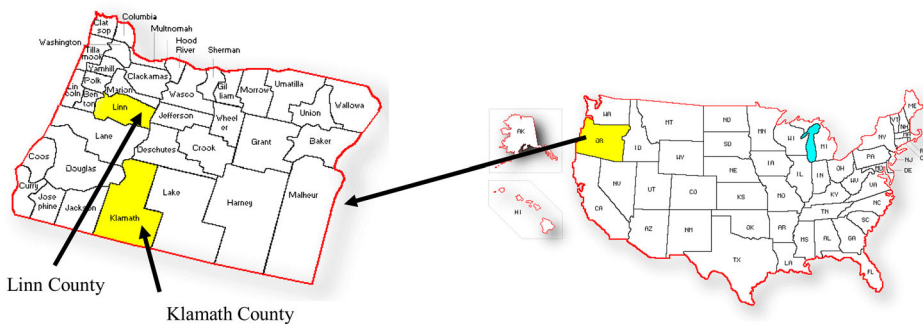


Figure 2. Map of Linn and Klamath Counties, Oregon, USA (Courtesy of diymaps.net/).

Our mail survey approach followed the recommendations suggested by Dillman et al. (2014). A pre-notice letter was mailed to sampled addresses first. Two weeks later, a complete survey packet was mailed. A postcard reminder and replacement survey were sequentially mailed. Unfortunately, over sixty percent of invited participants from Klamath County and about eighty percent from Linn County did not respond. In surveys with such low response rates, a non-response check is advised (see Dolsen & Machlis, 1991; Filion, 1975; Hammitt & McDonald, 1982) to determine if responses of non-respondents significantly differ from those obtained from survey respondents (i.e., determine if there is non-response bias). We conducted a telephone-based interview with randomly selected non-respondents from Klamath and Linn counties, asking nine randomly selected questions from the survey. Our findings from the non-respondent interviews did not suggest any substantive difference between those who responded and those who did not. For example, all effect sizes of differences were small, with a marginal average of 0.09.

Measurement model validation

The reflective measures we developed for constructs in the hypothesized research model were based on those suggested by existing research literature (e.g., McGehee & Andereck, 2004) and slightly modified to fit our study context (see Tables 1 and 2). Measures for residents' support for tourism, perceived negative tourism impacts and perceived positive tourism impacts were all based on McGehee and Andereck (2004). Measures for satisfaction with life were based on Diener et al. (1985). Measures for positive affective emotions, negative affective emotions, and psychological wellbeing were based on Diener (2009). Survey participants were asked to indicate the level of agreement with statements measuring constructs indicated above on a 5-point scale, where 1 represented strong disagreement, and 5 represented strong agreement. Additionally, the survey participants were asked questions about their socio-demographic characteristics, including their age, gender, education, income, location of residence, and employment, including employment history in the timber industry. The demographic variables of gender, age, and income of residents were compared with U.S. Census data for 2013–2017. Results indicated that there was less than a five percent difference between our sample and the general population regarding the percentage of males and females and the respondents' incomes in both counties. However, differences were found in age categories (e.g., 59% of respondents were 45 years of age and above), which differed with census data by over five percent in more than half of each county's age categories. Therefore, a post-stratification weighting approach (see Vaske et al., 2011a, 2011b) was used to align the data obtained from the survey respondents with the Census-reported characteristics of Linn and Klamath County residents.

Data from both samples were then pooled for measures validation and hypothesis testing. Construct measures were validated using confirmatory factor analysis (CFA) in EQS version 6.1 (Byrne, 2006). Two CFA measurement models (the tourism attitudes model and the quality-of-life model) were estimated separately for simplicity and following existing studies (e.g., Woosnam, 2012). The constructs and measures for the tourism attitudes measurement model are shown in Table 1, while constructs and measures for the quality-of-life model are shown in Table 2. Both measurement models were examined

Table 1. Validating tourism attitudes measurement model.

Construct and measurement items	Mean	STD	Std. loadings	Critical ratio	AVE	Composite reliability
Perceived Negative Tourism Impact (PNTI)					.58	.87
Tourism results in more vandalism in a community	2.74	.89	.63	N/A		
An increase in tourists in my community will lead to friction between local residents and tourists	2.63	.89	.69	17.98		
In recent years, my community has become overcrowded because of tourists	2.14	.89	.75	16.64		
Tourists are a burden on a community's services	2.29	.90	.84	17.41		
Tourists negatively affect a community's way of life	2.26	.87	.87	18.85		
Tourism development increases traffic problems ^a	3.43	.95	.59	16.57		
Tourism results in more litter ^a	3.51	.94	.60	16.62		
Tourism results in increased cost of living ^a	2.99	.94	.60	16.59		
Native people are being exploited by tourism ^a	2.39	.99	.51	15.32		
Perceived Positive Tourism Impact (PPTI)					.60	.90
The tourism industry provides worthwhile job opportunities for community residents	3.88	.79	.73	N/A		
Tourism encourages a variety of cultural activities by local residents	3.86	.76	.73	16.78		
Tourism provides cultural exchange and education	3.75	.78	.80	22.51		
Because of tourism, communities develop more parks and recreational areas that local residents can use	3.70	.85	.80	20.59		
Shopping opportunities are better in communities as a result of tourism	3.68	.89	.81	18.72		
Increase in tourist visits improves the local economy ^a	4.00	.71	.61	9.32		
Tourism increases a community's tax revenue ^a	3.79	.73	.48	12.04		
Tourism improves the quality of public services ^a	3.28	.89	.61	14.41		
Support for Tourism (ST)					.67	.94
The quality of public services in my community has improved due to tourism	3.59	.94	.74	N/A		
Tourism can be one of the most important industries for a community	3.50	.99	.87	25.57		
Additional tourism would help this community grow in the right direction	3.62	.90	.81	25.86		
The tourism industry will continue to (or could) play a major economic role in this community	3.63	.91	.83	22.00		
I am happy and proud to see tourists coming to see what my community has to offer	3.59	.94	.86	24.60		
I support tourism having a vital role in this community	3.44	.94	.87	23.16		
Tourism holds great promise for my community's future	3.49	.96	.79	20.96		
The tourism organization of my community's government should do more to promote tourism	3.35	1.04	.78	21.37		

Note: ^a indicates measures that were dropped during CFA; AVG = Average Variance Extracted; STD = Standard Deviation; Std.loadings = Standardized loadings. Robust model fit indices: S.B. $\chi^2 = 699.45$ (df = 203, $p < .001$), CFI = .93, RMSEA = .06 (95% CI, .05 – .06). Item responses were measured on a 5-point scale, where 1 = strongly disagree and 5 = strongly agree.

for reliability and validity following Byrne's (2006) guidelines. For example, Byrne (2006) suggested LaGrange Multiplier test-based modifications were performed. The final CFA modeling results indicated a good model fit for the tourism attitudes measurement model [S.B. $\chi^2 = 699.45$, df = 203, $p < .001$, CFI = .93, RMSEA = .06 (95% CI, .05 – .06)], and the quality-of-life model [S.B. $\chi^2 = 731.59$, df = 368, $p < .001$, CFI = .96, RMSEA = .04 (95% CI, .03 – .04)]. The measures and associated constructs were examined for reliability and validity. Following Byrne (2006), measures with standardized loadings below 0.5 were removed (these items are shown in Tables 1 and 2 but were not considered in

Table 2. Validating quality of life measurement model.

Construct and measurement items	Mean	STD	Std. loadings	Critical ratio	AVE	Composite reliability
Satisfaction with Life (SWL)					.64	.91
In most ways life in our family is close to ideal	3.77	.90	.85	N/A		
The conditions of life in our family are excellent	3.72	.96	.87	29.19		
I am satisfied with life in our family	3.95	.89	.89	27.07		
So far, I have gotten the important things I want in life	3.96	.88	.75	19.83		
If I could live my life over, I would change almost nothing	3.28	1.14	.63	19.43		
Positive affective emotions (PAE)					.50	.89
In the past 12 months, I have felt interested	3.76	.92	.66	N/A		
In the past 12 months, I have felt excited	3.13	1.05	.77	17.81		
In the past 12 months, I have felt strong	3.29	1.06	.67	14.10		
In the past 12 months, I have felt enthusiastic	3.37	1.03	.84	17.01		
In the past 12 months, I have felt proud	3.54	1.07	.60	13.15		
In the past 12 months, I have felt determined	3.63	1.01	.66	12.98		
In the past 12 months, I have felt attentive	3.67	.95	.64	13.88		
In the past 12 months, I have felt active	3.48	1.03	.61	11.71		
In the past 12 months, I have felt inspired	3.31	1.07	.78	15.90		
Negative affective emotions (NAE)					0.51	0.89
In the past 12 months, I have felt disturbed	2.10	1.08	.68	N/A		
In the past 12 months, I have felt upset	2.13	1.05	.77	25.43		
In the past 12 months, I have felt nervous	2.02	1.05	.76	17.03		
In the past 12 months, I have felt Jittery	1.64	.89	.73	14.50		
In the past 12 months, I have felt ashamed	1.27	.67	.59	9.22		
In the past 12 months, I have felt afraid	1.50	.83	.74	14.98		
In the past 12 months, I have felt scared	1.44	.78	.74	15.28		
Psychological wellbeing (PWB)					.52	.90
I lead a purposeful and meaningful life	4.02	.74	.80	N/A		
My social relationships are supportive and rewarding	3.92	.81	.72	20.98		
I am engaged and interested in my daily activities	3.97	.74	.79	21.08		
I actively contribute to the happiness and wellbeing of others	3.98	.75	.68	14.76		
I am competent and capable in the activities that are important to me	4.14	.68	.69	14.16		
I live a good life	4.24	.68	.76	19.49		
I am optimistic about my future	3.93	.92	.67	16.77		
People respect me	4.10	.71	.65	14.48		

Note: AVG = Average Variance Extracted; STD = Standard Deviation; Std.loadings = Standardized loadings. Robust model fit indices: $S.B.\chi^2 = 731.59$ ($df = 368$, $p < .001$), CFI = .96, RMSEA = .04 (95% CI, .03 – .04). Item responses were measured on a 5-point scale, where 1 = strongly disagree and 5 = strongly agree.

later modeling). Consequently, following Lance et al. (2006), all constructs in our hypothesized models were deemed reliable – that is, composite reliability values exceeded the 0.80 threshold. Composite reliability coefficients ranged from 0.84 to 0.91 (Tables 1 and 2). The convergent validity of constructs was also confirmed by the statistical significance of standardized loadings exceeding the critical ratio ($t = 3.23$, $p < 0.001$) (Tabachnick & Fidell, 2007), and average variance extracted by each construct exceeding 0.5 thresholds (Hair et al., 2010). The discriminant validity of all constructs was confirmed by comparing factor correlations with the square root of average variance extracted (AVE) by each factor (Fornell & Larcker, 1981). Table 3 shows that correlations among constructs did not exceed the square root of AVE.

Finally, both measurement models were tested for common method bias (CMB), which is recommended for studies using data obtained from questionnaire surveys

Table 3. Inter-construct correlations.

	1	2	3	4	5	6	7
Satisfaction with life	.80^a						
Negative affect	-.37*	.71					
Positive affect	.56*	-.26*	.71				
Psychological wellbeing	.73*	-.46*	.69*	.72			
Negative tourism impact perceptions	-.10	.03	-.14	-.14*	.76		
Positive tourism perceptions	.16*	-.03*	.24*	.28*	.20*	.77	
Support for tourism	.14*	-.03*	.19*	.18*	-.62*	.82*	.82

Note: *correlations significant at 0.05, ^abold and diagonal elements are the square root of the variance shared between factors and their measures (Average Variance Extracted). Off-diagonal elements are factor correlations.

(Podsakoff et al., 2003). Chi-square difference test results (Table 4) show a significant difference between a multi-factor and single-factor models for both tourism attitudes model ($\Delta S.B.\chi^2 = 1179.03$, $\Delta df = 3$, p -value < .001) and quality of life measurement models ($\Delta S.B.\chi^2 = 2110.45$, $\Delta df = 5$, p -value < .001). Considering that the single-factor measurement models do not meet the threshold for good model fit indices (e.g., RMSEA value below 0.08, according to Blunch, 2015), these results reveal that the common method bias is not of concern.

Following the successful validation of both measurement models, we estimated a set of covariance-based structural models, including the baseline SET model (Figure 1a) and two competing models (i.e. the CAT model and the integrated SET & CAT model as shown in Figure 1b and c, respectively). Initially, the objective of our structural equation modeling was to estimate the three models individually and then compare them to determine the best fitting model. We used goodness-of-fit indices suggested in the literature to assess hypothesized models explaining support for tourism (i.e., Comparative Fit Index at or above 0.95 represents a good fitting model according to Hu & Bentler, 1999; Root Mean Square Error of Approximation at or below 0.05 represents a close-fitting model according to Browne & Cudeck, 1993). Additionally, we used the Symonds and Moussalli (2011) suggested Akaike Information Criterion (AIC) (i.e., a structural model with lower AIC is superior model). According to Nunkoo and So (2016), citing Akaike (1987), AIC takes into account both model fit and parsimony. As shown in Table 5, the alternative model integrating SET and CAT into a single (see Figure 1c) was better fit for the data (CFI = .95, RMSEA = .035 with a 95% CI of .032–.037) and is a superior structural model (AIC = 89.09) compared to the baseline model (AIC = 187.55) and the alternative CAT model (AIC = 449.52). Selecting the superior SET & CAT model paved way for hypothesis testing.

Table 4. Common Method Bias (CMB) evaluation results.

	Fit Indices (Multi-factor model)		Fit Indices (One common factor model)		Model Comparison Change in Chi-square & degrees of freedom	
	Model 1a	Model 2a	Model 1b	Model 2b	1a vs. 1b	2a vs. 2b
S.B. χ^2	731.59	699.45	2842.04	1878.48	$\Delta S.B.\chi^2 = 2110.45$	$\Delta S.B.\chi^2 = 1179.03$
df	368	203	373	206	$\Delta df = 5$	$\Delta df = 3$
p-value	<.001	<.001	<.001	<.001	<.001	<.001
CFI	.96	.93	.69	.76		
RMSEA (95%CI)	.04 (.03–.04)	.06 (.05–.06)	.1 (.09–.1)	.1 (.09–.11)		

Note: Model 1a = multi-factor quality of life measurement model; Model 1b = one common factor quality of life measurement model; Model 2a = multi-factor tourism attitudes measurement model; Model 2b = one common factor tourism attitudes measurement model. CFI = Confirmatory Fit Index, RMSEA = Root Mean Square Error of Approximation, CI = Confidence Interval, S.B. χ^2 = Satorra-Bentler Scaled Chi-square, df = degrees of freedom.

Table 5. Structural model comparison.

Models	AIC	CFI	RMSEA	95% CI		S.B. χ^2	Df	Pvalue	R ²
				Lower	Upper				
Model # 1 (Baseline SET model-see Figure 1a)	187.55	.94	.056	.051	.062	449.55	151	<.001	.62
Model # 2 (Alternative CAT model – see Figure 1b)	449.52	.91	.044	.041	.046	2483.52	1017	<.001	.05
Model #3 (Alternative SET/CAT model-see Figure 1c)	81.09	.95	.035	.032	.037	1948.91	1015	<.001	.68

Note: AIC = Akaike Information Criterion, CFI = Confirmatory Fit Index, RMSEA = Root Mean Square Error of Approximation, CI = Confidence Interval, S. B χ^2 = Satorra-Bentler Scaled Chi-square, Df = degrees of freedom, R² = variance in support for tourism variable explained by the model.

Results

Sample profile

Fifty-one percent of respondents were female and 48 percent were male ([Table 6](#)). About 59 percent were aged 45 or above. Most of the respondents were white or Caucasian (85

Table 6. The sample profile ($n = 721$).

Variable	Frequency	Percentage
Gender		
Male	351	48
Female	370	50.7
Age		
18–24	78	10.7
25–34	117	16
35–44	109	14.9
45–65	253	34.6
Above 65	175	23.9
Ethnicity		
White/Caucasian	643	88.5
Asian/Asian American	6	.8
Two or more races	34	4.8
Hispanic/Latino	9	1.2
American Indian	14	1.9
Others (Black, Native American)	20	2.7
Education		
Less than high school diploma	13	1.8
High school diploma or GED	207	28.5
2-year associate degree	179	24.5
4-year college degree	213	29.2
Advanced degree	116	16
Annual income		
Under \$15,000	73	10.3
\$15,000–\$24,999	90	12.9
\$25,000–\$34,999	56	8
\$35,000–\$49,999	95	13.5
\$50,000–\$74,999	135	19.2
\$75,000–\$99,999	108	15.3
\$100,000–\$149,99	96	13.7
\$150,000–\$199,999	32	4.5
\$200,000 and above	18	2.6
Political orientation		
Liberal	181	25.3
Moderate	237	33.2
Conservative	297	41.5

percent) earning less than \$75,000 annual income (64 percent). Most respondents had less than a four-year college education (54 percent).

Hypothesis testing

Hypothesis 1a (perceived positive tourism impact predicts support for tourism) was supported by our empirical analysis ($\beta = .65, p < .001$). Similarly, hypothesis 1b (perceived negative tourism impact predicts support for tourism) was supported ($\beta = -.27, p < .001$) as was Hypothesis 2a (perceived positive tourism impact predicts perceived satisfaction with life) ($\beta = .16, SE = p < .01$). Similarly, hypothesis 2b (perceived positive tourism impact predicts psychological wellbeing) was supported ($\beta = .20, p < .001$). However, hypotheses 3a (perceived negative tourism impact predicting satisfaction with life: $\beta = -.02, p > .05$) and 3b (perceived negative tourism impact predicting psychological wellbeing: $\beta = -.04, p > .05$) were not supported.

Hypothesis 4a (perceived satisfaction with life predicts positive affective emotions) was supported ($\beta = .66, p < .001$). In contrast, hypothesis 4b (perceived satisfaction with life predicts negative affective emotions) was not supported ($\beta = -.08, p > .05$). Similarly, hypothesis 5a (perceived psychological wellbeing predicts positive affective emotions) was not supported ($\beta = .06, p > .05$), while hypothesis 5b (perceived psychological wellbeing predicts negative affective emotions) was supported ($\beta = -.40, p < .001$). Finally, hypothesis 6a (positive affective emotions increase support for tourism) was supported ($\beta = .15, p < .05$), whereas hypothesis 6b (negative affective emotions reduce support for tourism) was not supported ($\beta = -.01, p > .05$) (Figure 3).

Discussion and conclusions

Overall, our empirical results suggest support for the SET framed hypothesis 1, indicating that perceived tourism impacts predict support for tourism, which reaffirms established knowledge of a strong association between perceived tourism impact and support for tourism (e.g., Boley et al., 2014; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2011; Nunkoo & So, 2016). However, our results offer varying levels of support for CAT-framed hypotheses (i.e., hypotheses 2, 3, 4, and 5). For example, our results support hypothesis 2, indicating that perceived positive tourism impact predicts perceived quality of life. In contrast, hypothesis 3, indicating that perceived negative tourism impact predicts perceived quality of life, is not supported. Still, these results corroborate the findings from previous studies (e.g., Kim et al., 2013; Munanura & Kline, 2022; Nunkoo & So, 2016). They reaffirm the value of CAT in conceptually framing the link between perceived tourism impact and quality of life, particularly the relations between perceived positive tourism impact and quality of life, as essential factors in the primary cognitive appraisal of tourism benefits. A strong relationship between perceived positive tourism impact and quality of life during the initial process of appraising tourism is supported by cognitive psychology. According to Watson and Spence (2007), for example, an individual decides how an event (e.g., tourism) enhances their wellbeing during the initial phase of appraising the event and before judging an event as good or bad.

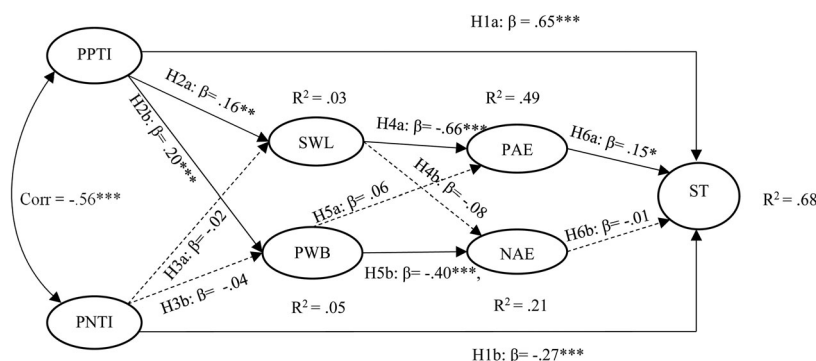


Figure 3. A structural equation model explaining support for tourism (an integrated SET & CAT perspective).

Note: Model-Fit Statistics $\text{SB}\chi^2 = 1948.91$, $\text{df} = 1015$, $p < .001$, CFI = .095, RMSEA = 0.035 (95% CI, 0.032 – 0.037), AIC = 81.09. *** = standardized regression weights and correlation are significant at $p < .001$; ** = standardized regression weights are significant at $p < .01$; * = standardized regression weights are significant at $p < .05$; dotted lines represent statistically insignificant relationship; SWL = satisfaction with life; PWB = psychological wellbeing; NAE = negative affective emotions; PAE = positive affective emotions; ST = support for tourism; PPTI = perceived positive tourism impacts; PNTI = perceived negative tourism impacts; H1a = Hypothesis 1a.

Our results also suggest that satisfaction with life plays a role in shaping affective emotions (hypothesis 4). For example, our results suggest that positive affective emotions are predicted by satisfaction with life, whereas negative affective emotions are not. In contrast, psychological wellbeing predicts only negative affective emotions. These results variably support but also contradict CAT's perspective that cognitive appraisal leads to positive or negative emotions (Lazarus & Folkman, 1984). In our study, only positive affective emotions were suggested as predicting support for tourism. From a CAT's perspective (Smith & Lazarus, 1993), our results show that the primary appraisal of tourism (i.e., the mental evaluation of how one perceives tourism to be positively impacting their overall quality of life) arguably leads to secondary appraisal eliciting positive affective emotions (e.g., one is happy that tourism positively impacts their wellbeing) determining support for tourism. Our results showing a strong relationship between positive affective emotions and support for tourism corroborate previous studies linking positive emotions to support tourism (e.g., Munanura et al., 2021; Ouyang et al., 2017; Woosnam, 2012). This finding reaffirms the CAT's argument that secondary cognitive appraisal represents an efficacy-adaptive behavior (e.g., the decision to support tourism because it enhances one's wellbeing) where one determines that supporting tourism will improve or sustain one's wellbeing benefits from tourism (i.e., enhances the quality of life and stimulates positive emotions) (Smith & Lazarus, 1993).

The weak relationship we found between negative affective emotions and support for tourism is inconsistent with Ouyang et al. (2017) which suggested a strong relationship between negative affective emotions and support for tourism. Our results suggest that positive factors likely are amplified in the cognitive appraisal of events compared to adverse factors in one's judgment of events such as tourism. As Munanura et al. (2021) have argued, negative factors may not be critical in the cognitive appraisal of tourism. This argument is supported in the literature, as it is believed that people likely minimize negative factors cognitively and amplify positive factors while appraising

tourism (e.g., Chancellor et al., 2011). It has been argued that when appraising situations, people typically regulate emotions by cognitively modifying appraised situations into what is likely to reduce negative emotions and maintain or increase positive emotions (Gross & Thompson, 2007). For example, an individual is likely to judge tourism positively if it provides jobs even as it also leads to litter in the community – the latter negative impact is minimized by considering that litter clean-up can be funded by tourism-generated revenue. Lazarus and Folkman (1984) refer to this emotion regulation process as a problem-focused coping. It is likely that a weak role of negative affective emotions in a cognitive process determining support results from problem-focused coping where individuals modify the judgment of how tourism impacts their quality of life to maintain or increase positive emotions associated with tourism. Future research could further examine the occurrence of perceived negative tourism impacts and the resulting negative affective emotions in an emotional regulation process.

Altogether, our study's findings suggest the potential for CAT to explain the role of quality of life in the relationship between perceived tourism impacts and support for tourism. Previous tourism research has examined the relationship between impacts and support for tourism by integrating SET with other theories (e.g., Boley et al., 2014; Nunkoo & Gursoy, 2012; Nunkoo & So, 2016). Nunkoo and So (2016) incorporated satisfaction with life quality, personal benefits from tourism, knowledge of tourism, trust in government, and power in tourism into their model. Boley et al. (2014) model added empowerment constructs to their SET model. McGehee and Andereck's (2004) model added a 'personal benefit from tourism' variable to the SET model and obtained a significantly better-performing model than the other models tested in their study. The integration of SET with different theoretical orientations to increase knowledge of residents' support for tourism has been empirically supported by a variety of studies, with each testing different candidate theories for integration. The results of our study support the potential for integrating CAT with SET, to improve understanding of the factors influencing residents' support for tourism. We note, however, that our results indicated only a small difference in the variance explained by the SET/CAT model (68 percent) compared to the SET model (62 percent). Future research could further test the integration of SET and CAT in tourism attitudinal studies to further advance our understanding of how socio-psychological elements, such as assessments of quality of life and affective emotions, likely shape residents' intentions to support or oppose tourism.

Study implications

Our findings lead to a few notable research and management implications. From a research perspective, our study empirically reaffirmed the utility of CAT in explaining the cognitive process of the exchange shaping the resident's support for tourism. It is one of a few studies that have applied CAT to explain support for tourism (Munanura et al., 2021; Ouyang et al., 2017; Zheng et al., 2019). It also extends knowledge by demonstrating the potential of increased precision to explain residents' support for tourism when CAT is conceptually integrated within the SET framework (i.e. CAT variables mediate the exchange relationship between perceived tourism impact and support for tourism), as demonstrated in this study. Although this paper presents an initial attempt to integrate CAT and SET conceptually and empirically, future empirical

applications further testing the efficacy of integrating CAT and SET are needed across diverse contexts to ascertain the transferability of our study's findings. For example, the finding that positive attributes of tourism, especially how it impacts people's quality of life, and the resulting positive affective emotions play a vital role in cognitive processes determining support for tourism needs confirmation in other study sites.

Additionally, one of the pertinent questions our findings raises is 'What factors influence the modification or suppression of negative attributes of tourism during the cognitive appraisal processes determining residents' support for tourism?' As this and other studies show, (e.g., Munanura et al., 2021; Nunkoo & So, 2016; Ouyang et al., 2017), negative tourism attributes play a weak role in the cognitive appraisal of and support for tourism. Drawing on research on emotion regulation (e.g., Gross & Thompson, 2007), it has been suggested that after making initial cognitive assessments of a stimulus (e.g. evaluating the benefit or cost of travel to one's wellbeing), negative emotions are suppressed in order to preserve or enhance positive emotions and the associated favorable life circumstances. Therefore, emotion regulation is a problem-focused coping mechanism responding to the appraised wellbeing harm or benefit of a stimulus such as tourism, according to the CAT literature (e.g., Lazarus, 1991; Ellsworth & Scherer, 2003). Emotion regulation occurs at the re-appraisal stage (i.e. secondary appraisal), suppressing negative and amplifying positive emotion outcomes of the initial appraisals (i.e., tourism impact on quality of life). According to Lazarus (1991), it may be argued that such problem-focused emotion regulation is intended to enable one to choose an environment (for example, support for tourism) in the future that reduces risk (harmful tourist impact) and adds value (i.e., maintains or increase positive tourism impact). Future research is needed to fully understand the process of emotion regulation in tourist appraisals and the crucial factors that influence it, even though earlier tourism research has hinted at the idea (e.g., Chancellor et al., 2011).

From a management perspective, our finding of a strong link between positive affective emotions and support for tourism (i.e. the secondary appraisal of tourism) suggests that destinations are more likely to improve residents' support for tourism by investing in tourism outreach programs that showcase the impacts most likely to generate positive affective emotions of residents, which is most likely to enhance residents' support for tourism (e.g., showing the level of growth in tourism jobs and revenue invested public services, designing messages that show public services funded with tourist donations). Secondly, tourism outreach programs could benefit from showing the full extent of tangible quality of life benefits of tourism in a destination. Investing in efforts to raise awareness about how tourism positively impacts the residents' quality of life could be as effective as creating programs to mitigate the negative impacts of tourism. This suggestion is critical, considering that negative tourism attributes are likely moderated in a problem-focused copying process of appraising tourism benefits.

Study limitations

We acknowledge the following study limitations. First, ours is one of the initial studies attempting to integrate CAT and SET to examine how support for tourism is cognitively determined using data from two counties in the state of Oregon, United States. Therefore, generalizing the utility of CAT to explain support for tourism beyond the study location

requires empirical studies across multiple geographical locations and contexts. Second, our study did not consider the potential effects of the residents' high expectations of the tourism industry on the cognitive moderation of negative tourism attributes and amplification of positive tourism attributes (Chancellor et al., 2011). Our study sites were in regions of Oregon that have been adversely affected by the loss of a historically lucrative timber industry. Therefore, residents of our surveyed communities may have high expectations of tourism as an alternative economic sector for those who have lost jobs and businesses from reduced timber operations in the region. Third, what Sharpley (2014) calls 'intrinsic factors' (such as personal values, political orientation, demographic characteristics, and history of working in the timber industry) and 'extrinsic factors' (such as the level of tourism development) affect how people feel about tourism, and we didn't try to control for these possible effects. When doing future research on how people think about tourism, it would be helpful to account for how internal and external factors might act as moderators. For example, such internal and external factors could be considered moderating variables to examine whether there are differences in the relationships occurring in a cognitive process determining support for tourism when such factors are controlled for.

Fourth, the objective or material aspects of wellbeing were not considered in the CAT model and were assumed to be accounted for in our study's subjective and psychological wellbeing variables based on the bottom-up situational influences approach. However, as Uysal et al. (2016) argued, objective wellbeing is an essential aspect of wellbeing to consider in tourism studies examining links between tourism and quality of life. Future research integrating objective wellbeing into the CAT model predicting support for tourism could advance knowledge about how tourism effects are appraised and related to emotions that predict support. Finally, our findings demonstrate a high correlation between constructs that are positively framed (e.g. positive tourism impacts, satisfaction with life, and support for tourism). The positive formulated measurements may be responsible for a strong link between these constructs. Future research could rule out this potential problem by including negatively framed quality of life constructs to examine negatively framed construct relationships during the primary appraisal process. This would illuminate how negative tourism impacts relate to perceived negative quality of life, even though emotion regulation research contends that negative factors are suppressed during cognitive appraisals (Gross & Thompson, 2007; Lazarus, 1991).

Overall, our study suggests that integrating SET and CAT may improve empirical analysis of the factors that explain residents' support for tourism. Additionally, our study found that positive tourism attributes and positive affective emotions play a critical role in the cognitive process shaping the residents' support for tourism. It also suggests that negative tourism attributes are likely moderated when people appraise tourism benefits. These key findings make the case for conceptually integrating SET and CAT to explain support for tourism. More empirical research integrating SET and CAT as an umbrella framework modeling the relationship between perceived tourism impact, quality of life, and support for tourism is needed across multiple geographical scales to confirm the utility of CAT in predicting support for tourism.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by U.S. Forest Service Pacific Northwest Research Station [grant number 16-JV-11261955-054].

References

- Akaike, H. (1987). Factor Analysis and AIC. *Psychometrika*, 52(3), 317–332.
- Andereck, K. L., & Nyaupane, G. P. (2011). Exploring the nature of tourism and quality of life perceptions among residents. *Journal of Travel Research*, 50(3), 248–260. <https://doi.org/10.1177/0047287510362918>
- Andrews, A., & Kutara, K. (2005). *Oregon's timber harvests: 1849-2004*. Oregon Department of Forestry. 152 p.
- Ap, J. (1992). Residents' perceptions on tourism impacts. *Annals of Tourism Research*, 19(4), 665–690. [https://doi.org/10.1016/0160-7383\(92\)90060-3](https://doi.org/10.1016/0160-7383(92)90060-3)
- Blunch, N. J. (2015). Introduction to structural equation modeling using IBM SPSS statistics and EQS. Introduction to Structural Equation Modeling Using IBM SPSS Statistics and EQS, 1–360.
- Boley, B. B., McGehee, N. G., Perdue, R. R., & Long, P. (2014). Empowerment and resident attitudes toward tourism: Strengthening the theoretical foundation through a Weberian lens. *Annals of Tourism Research*, 49, 33–50. <https://doi.org/10.1016/j.annals.2014.08.005>
- Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K. A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136–162). Newbury Park, CA: Sage.
- Byrne, B. M. (2006). *Structural equation modeling with EQS: Basic concepts, applications, and programming* (2nd ed., pp. xii, 440). Lawrence Erlbaum Associates Publishers.
- Chancellor, C., Yu, C. P. S., & Cole, S. T. (2011). Exploring quality of life perceptions in rural midwestern (USA) communities: An application of the core–periphery concept in a tourism development context. *International Journal of Tourism Research*, 13(5), 496–507. <https://doi.org/10.1002/jtr.823>
- Dean Runyan Associates. (2019). *Oregon travel impacts: 1991–2019*. Oregon Travel Commission.
- Diener, E. (Ed.) (2009). *Assessing well-being* (Vol. 39). Springer Netherlands.
- Diener, E. (2012). New findings and future directions for subjective wellbeing research. *American Psychologist*, 67(8), 590–597. <https://doi.org/10.1037/a0029541>
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, 49(1), 71–75. https://doi.org/10.1207/s15327752jpa4901_13
- Diener, E., Suh, E. M., Lucas, R. E., & Smith, H. L. (1999). Subjective wellbeing: Three decades of progress. *Psychological Bulletin*, 125(2), 276–302. <https://doi.org/10.1037/0033-2909.125.2.276>
- Diener, E., Wirtz, D., Tov, W., Kim-Prieto, C., Choi, D., Oishi, S., & Biswas-Diener, R. (2010). New well-being measures: Short scales to assess flourishing and positive and negative feelings. *Social Indicators Research*, 97(2), 143–156. <https://doi.org/10.1007/s11205-009-9493-y>
- Dillman, D. A., Smyth, J. D., & Christian, L. M. (2014). *Internet, phone, mail, and mixed mode surveys: The tailored design method* (4th ed., pp. xvii, 509). John Wiley & Sons Inc.
- Dolsen, D. E., & Machlis, G. E. (1991). Response rates and mail recreation survey results: How much is enough? *Journal of Leisure Research*, 23(3), 272–277. <https://doi.org/10.1080/00222216.1991.11969858>
- Ellsworth, P. C., & Scherer, K. R. (2003). Appraisal processes in emotion. In R. J. Davidson, K. R. Scherer, & H. H. Goldsmith (Eds.), *Handbook of affective sciences* (pp. 572–595). Oxford, UK: Oxford University Press.
- Erul, E., Woosnam, K. M., & McIntosh, W. A. (2020). Considering emotional solidarity and the theory of planned behavior in explaining behavioral intentions to support tourism development. *Journal of Sustainable Tourism*, 28(8), 1158–1173. <https://doi.org/10.1080/09669582.2020.1726935>
- Filion, F. L. (1975). Estimating bias due to nonresponse in mail surveys. *Public Opinion Quarterly*, 39(4), 482–492. <https://doi.org/10.1086/268245>
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. <https://doi.org/10.1177/002224378101800104>

- Garrod, B. (2003). Local participation in the planning and management of ecotourism: A revised model approach. *Journal of Ecotourism*, 2(1), 33–53. <https://doi.org/10.1080/14724040308668132>
- Gross, J. J., & Thompson, R. A. (2007). Emotion regulation: Conceptual foundations. In J. J. Gross (Ed.), *Handbook of emotion regulation* (pp. 3–24). Guilford.
- Hair, J. F., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate Data Analysis* (Vol. 6). Pearson Prentice Hall, Upper Saddle River, NJ 1. Press.
- Hammitt, W. E., & McDonald, C. D. (1982). Response bias and the need for extensive mail questionnaire follow-ups among selected recreation samples. *Journal of Leisure Research*, 14(3), 207–216. <https://doi.org/10.1080/00222216.1982.11969517>
- Homans, G. C. (1958). Social behavior as exchange. *American Journal of Sociology*, 597–606.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1–55.
- Jurowski, C., & Gursoy, D. (2004). Distance effects on residents' attitudes towards tourism. *Annals of Tourism Research*, 31(2), 296–312. <https://doi.org/10.1016/j.annals.2003.12.005>
- Kelly, E. C., & Bliss, J. C. (2009). Healthy forests, healthy communities: An emerging paradigm for natural resource-dependent communities? *Society & Natural Resources*, 22(6), 519–537. <https://doi.org/10.1080/08941920802074363>
- Kim, K., Uysal, M., & Sirgy, M. J. (2013). How does tourism in a community impact the quality of life of community residents? *Tourism Management*, 36, 527–540. <https://doi.org/10.1016/j.tourman.2012.09.005>
- Lai, H. K., Pinto, P., & Pintassilgo, P. (2021). Quality of life and emotional solidarity in residents' attitudes toward tourists: The case of Macau. *Journal of Travel Research*, 60(5), 1123–1139. <https://doi.org/10.1177/0047287520918016>
- Lance, C. E., Butts, M. M., & Michels, L. C. (2006). The sources of four commonly reported cutoff criteria: What did they really say? *Organizational Research Methods*, 9(2), 202–220. <https://doi.org/10.1177/1094428105284919>
- Lazarus, R. S. (1991). *Emotion and adaptation*. Oxford University Press.
- Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer.
- Ma, J., Scott, N., Gao, J., & Ding, P. (2017). Delighted or satisfied? Positive emotional responses derived from theme park experiences. *Journal of Travel & Tourism Marketing*, 34(1), 1–19. <https://doi.org/10.1080/10548408.2015.1125824>
- McGehee, N. G., & Andereck, K. L. (2004). Factors predicting rural residents' support of tourism. *Journal of Travel Research*, 43(2), 131–140. <https://doi.org/10.1177/0047287504268234>
- Munanura, I. E., & Kline, J. D. (2022). Residents' support for tourism: The role of tourism impact attitudes, forest value orientations, and quality of life in Oregon, United States. *Tourism Planning & Development*, 1–17. <https://doi.org/10.1080/21568316.2021.2012713>
- Munanura, I. E., Needham, M. D., Lindberg, K., Kooistra, C., & Ghahramani, L. (2021). Support for tourism: The roles of attitudes, subjective wellbeing, and emotional solidarity. *Journal of Sustainable Tourism*, 31(2), 1–16. <https://doi.org/10.1080/09669582.2021.1901104>
- Nunkoo, R., & Gursoy, D. (2012). Residents' support for tourism. *Annals of Tourism Research*, 39(1), 243–268. <https://doi.org/10.1016/j.annals.2011.05.006>
- Nunkoo, R., & Ramkissoon, H. (2011). Residents' satisfaction with community attributes and support for tourism. *Journal of Hospitality & Tourism Research*, 35(2), 171–190. <https://doi.org/10.1177/1096348010384600>
- Nunkoo, R., & So, K. K. F. (2016). Residents' support for tourism: Testing alternative structural models. *Journal of Travel Research*, 55(7), 847–861. <https://doi.org/10.1177/0047287515592972>
- OECD. (2013). *OECD guidelines on measuring subjective well-being*. OECD Publishing.
- Ouyang, Z., Gursoy, D., & Sharma, B. (2017). Role of trust, emotions, and event attachment on residents' attitudes toward tourism. *Tourism Management*, 63, 426–438. <https://doi.org/10.1016/j.tourman.2017.06.026>
- Palmer, M., Kuegler, O., & Christensen, G. (Eds.). (2018). *Oregon's forest resources, 2006–2015: Ten-year forest inventory and analysis report*. Gen. Tech. Rep. PNW-GTR-971. U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station. 54 p.

- Palmer, N. J., & Chuamuangphan, N. (2018). Governance and local participation in ecotourism: Community-level ecotourism stakeholders in Chiang Rai Province, Thailand. *Journal of Ecotourism*, 17(3), 320–337. <https://doi.org/10.1080/14724049.2018.1502248>
- Perdue, R. R., Long, P. T., & Allen, L. (1987). Rural resident tourism perceptions and attitudes. *Annals of Tourism Research*, 14(3), 420–429. [https://doi.org/10.1016/0160-7383\(87\)90112-5](https://doi.org/10.1016/0160-7383(87)90112-5)
- Perdue, R. R., Long, P. T., & Allen, L. (1990). Resident support for tourism development. *Annals of Tourism Research*, 17(4), 586–599. [https://doi.org/10.1016/0160-7383\(90\)90029-Q](https://doi.org/10.1016/0160-7383(90)90029-Q)
- Phuc, H. N., & Nguyen, H. M. (2023). The importance of collaboration and emotional solidarity in residents' support for sustainable urban tourism: Case study Ho Chi Minh City. *Journal of Sustainable Tourism*, 31(2), 245–264. <https://doi.org/10.1080/09669582.2020.1831520>
- Podsakoff, P. M., MacKenzie, S. B., Lee, J. Y., & Podsakoff, N. P. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *Journal of Applied Psychology*, 88(5), 879–903. <https://doi.org/10.1037/0021-9010.88.5.879>
- Sharpley, R. (2014). Host perceptions of tourism: A review of the research. *Tourism Management*, 42, 37–49. <https://doi.org/10.1016/j.tourman.2013.10.007>
- Smith, C. A., & Lazarus, R. S. (1993). Appraisal components, core relational themes, and the emotions. *Cognition & Emotion*, 7(3–4), 233–269. <https://doi.org/10.1080/02699939308409189>
- Symonds, M. R., & Moussalli, A. (2011). A brief guide to model selection, multimodel inference and model averaging in behavioural ecology using Akaike's information criterion. *Behavioral Ecology and Sociobiology*, 65(1), 13–21. <https://doi.org/10.1007/s00265-010-1037-6>
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics* (5th ed., pp. xxvii, 980). Allyn & Bacon/Pearson Education.
- Uysal, M., Sirgy, M. J., Woo, E., & Kim, H. (L.). (2016). Quality of life (QOL) and well-being research in tourism. *Tourism Management*, 53, 244–261. <https://doi.org/10.1016/j.tourman.2015.07.013>
- Vaske, J. J., Jacobs, M. H., & Sijtsma, M. T. (2011a). Wildlife value orientations and demographics in The Netherlands. *European Journal of Wildlife Research*, 57(6), 1179–1187. <https://doi.org/10.1007/s10344-011-0531-0>
- Vaske, J. J., Jacobs, M. H., Sijtsma, M. T., & Beaman, J. (2011b). Can weighting compensate for sampling issues in internet surveys? *Human Dimensions of Wildlife*, 16(3), 200–215. <https://doi.org/10.1080/10871209.2011.571230>
- Ward, C., & Berno, T. (2011). Beyond social exchange theory: Attitudes toward tourists. *Annals of Tourism Research*, 38(4), 1556–1569. <https://doi.org/10.1016/j.annals.2011.02.005>
- Watson, L., & Spence, M. T. (2007). Causes and consequences of emotions on consumer behaviour: A review and integrative cognitive appraisal theory. *European Journal of Marketing*, 41(5/6), 487–511. <https://doi.org/10.1108/03090560710737570>
- Woo, E., Kim, H., & Uysal, M. (2015). Life satisfaction and support for tourism development. *Annals of Tourism Research*, 50, 84–97. <https://doi.org/10.1016/j.annals.2014.11.001>
- Woosnam, K. M. (2012). Using emotional solidarity to explain residents' attitudes about tourism and tourism development. *Journal of Travel Research*, 51(3), 315–327. <https://doi.org/10.1177/0047287511410351>
- Woosnam, K. M., & Aleshinloye, K. D. (2013). Can tourists experience emotional solidarity with residents? Testing Durkheim's model from a new perspective. *Journal of Travel Research*, 52(4), 494–505. <https://doi.org/10.1177/0047287512467701>
- Woosnam, K. M., Norman, W. C., & Ying, T. (2009). Exploring the theoretical framework of emotional solidarity between residents and tourists. *Journal of Travel Research*, 48(2), 245–258. <https://doi.org/10.1177/0047287509332334>
- Zheng, D., Ritchie, B. W., Benckendorff, P. J., & Bao, J. (2019). The role of cognitive appraisal, emotion, and commitment in affecting resident support toward tourism performing arts development. *Journal of Sustainable Tourism*, 27(11), 1725–1744. <https://doi.org/10.1080/09669582.2019.1662029>