



# Support for tourism: the roles of attitudes, subjective wellbeing, and emotional solidarity

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## ABSTRACT

Research models applying social exchange theory to examine factors predicting residents' support for tourism have been challenged for their inability to explain support fully. Recent studies drawing from other theories indicated factors that arguably play a role in the social exchange relationship between perceptions of tourism impacts and support. One factor of interest is the cognitive appraisal process eliciting emotional solidarity with tourists (ES), which arguably predicts support. According to cognitive appraisal theory (CAT), residents' emotional feelings toward tourists result from a mental evaluation of how tourism is perceived to impact one's wellbeing. Although tourism studies applying CAT are emerging, knowledge is limited about the cognitive appraisal process that elicits ES. This article examines the nature of a cognitive appraisal process eliciting ES. Data were obtained from a random sample of 1477 residents of Oregon, United States. Results from a structural equation model, show that perceived positive tourism impacts strongly predict ES. Additionally, perceived positive tourism impacts indirectly impact ES through the expected change of wellbeing. This study also reveals that perceived negative community tourism impacts have a negative relationship with ES. Moreover, ES strongly predicts support. The article closes with a discussion of research and management implications.

## ARTICLE HISTORY

Received 26 June 2020

Accepted 5 March 2021

## KEYWORDS

Emotional solidarity; tourism impact; tourism support; subjective wellbeing; cognitive appraisal theory; social exchange theory

## Introduction

Residents' support for tourism has received substantial attention (e.g. Allen et al., 1993; Boley et al., 2014; Nunkoo & Ramkissoon, 2012). Theoretical reviews (Nunkoo et al., 2013; Sharpley, 2014) and empirical studies across multiple geographical contexts have enhanced understanding of support for tourism (McGehee & Andereck, 2004; Nunkoo et al., 2010; Ouyang et al., 2017; Phuc & Nguyen, 2020). Some research indicates that when residents perceive tourism negatively, it impacts the future security of tourism (McGehee & Andereck, 2004). In some cases, negative tourism impacts (e.g. increase in crime) cause resentment among residents and subsequently reduce their support for tourism (Woosnam, 2012). Research also associates perceived positive tourism impacts (e.g. improved community infrastructure) with support for tourism development (Nunkoo & So, 2016; Nunkoo et al., 2010).

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Understanding ways to enhance resident support for tourism is critical for sustainable tourism planning and management (Nunkoo & So, 2016; Sharpley, 2014). For tourism to be sustainable, its management must have actions and strategies informed by knowledge of tourism impacts. Controlling causes of impacts may reduce actual problems or change the perceptions of the problems, and potentially enhance residents' positive emotional reactions about tourists and their overall support for tourism. Some studies explore residents' support for tourism using social exchange theory (SET) (Sharpley, 2014). However, some have criticized SET's inadequacies (e.g. emphasis on economic gains to explain the exchange), in explaining support (Boley et al., 2014; Erul et al., 2020; Nunkoo & Ramkissoon, 2012; Sharpley, 2014; Woosnam, 2012). Therefore, a need exists to examine the utility of other theories that can explain the determining factors of support for tourism, including those of an intangible nature (Joo et al., 2018; Nunkoo & So, 2016; Ouyang et al., 2017; Phuc & Nguyen, 2020; Woosnam, 2012).

Many studies highlight a need for research that addresses how residents' feelings about tourists affect perceived tourism impacts and support (Woosnam, 2011, 2012; Woosnam & Norman, 2010; Woosnam et al., 2009). Since the introduction of the emotional solidarity with tourists (ES) concept by Woosnam et al. (2009), a number of empirical studies reveal that emotional reactions play a role in determining perceived tourism impacts and support (e.g. Hasani et al., 2016; Joo et al., 2018; Maruyama et al., 2019; Moghavvemi et al., 2017; Wang et al., 2020; Woosnam, 2012; Woosnam & Aleshinloye, 2018). However, according to cognitive appraisal theory (CAT), residents' emotional feelings stem from their evaluation of how tourism benefits or harms personal well-being (Smith & Lazarus, 1993). Although recent studies about attitudes toward tourists apply CAT (e.g. Ouyang et al., 2017; Zheng et al., 2019a, 2019b), room exists to explore the cognitive appraisal process that elicits ES. Additionally, studies that integrate wellbeing in the relationship between perceptions of tourism impacts and ES (e.g. Lai et al., 2020) lack an integrative theory linking ES to potential determinants (e.g. wellbeing and perceptions of tourism impacts).

This study addresses this knowledge gap by examining the nature of the cognitive appraisal process involving perceptions of tourism impacts, the expected impact of tourism growth on wellbeing, ES, and tourism support. Drawing on CAT (Lazarus & Smith, 1988; Smith & Lazarus, 1993), this study considers the proposition that residents' positive emotional reactions to tourists (commonly referred to as ES) are an outcome of a cognitive appraisal process that involves a mental evaluation of how tourism benefits or harms an individual's goals and desires. Therefore, this study aims to understand the relationship between ES and support for tourism, and the cognitive appraisal-based determinants of ES (i.e. perceptions of tourism impacts and expected changes in subjective wellbeing). This article utilizes empirical data from Oregon (United States) and discusses the theoretical underpinnings of the proposition above, the methodological approach, empirical results, and implications for research and management.

## Conceptual background

This article integrates CAT and the concept of ES into the SET-based conceptual model that links perceptions of tourism impacts to support for tourism. SET is applied to infer a relationship that exists between perceptions of tourism impacts and support for tourism. This study focuses on understanding the factors and processes that are involved in the SET-based relationship between perceptions of tourism impacts and support. Following Woosnam (2012), the concept of ES is applied to understand if residents' emotions about tourists predict their support for tourism. CAT is applied to understand perceptions that determine these emotions. Understanding the cognitive appraisal process that elicits positive emotional reactions to tourists should: (a) increase knowledge about how positive emotions about tourists are formed, and (b) inform management decisions concerning the investment of scarce public resources in activities likely to generate tourism support. Figure 1 illustrates the hypothesized relationships.

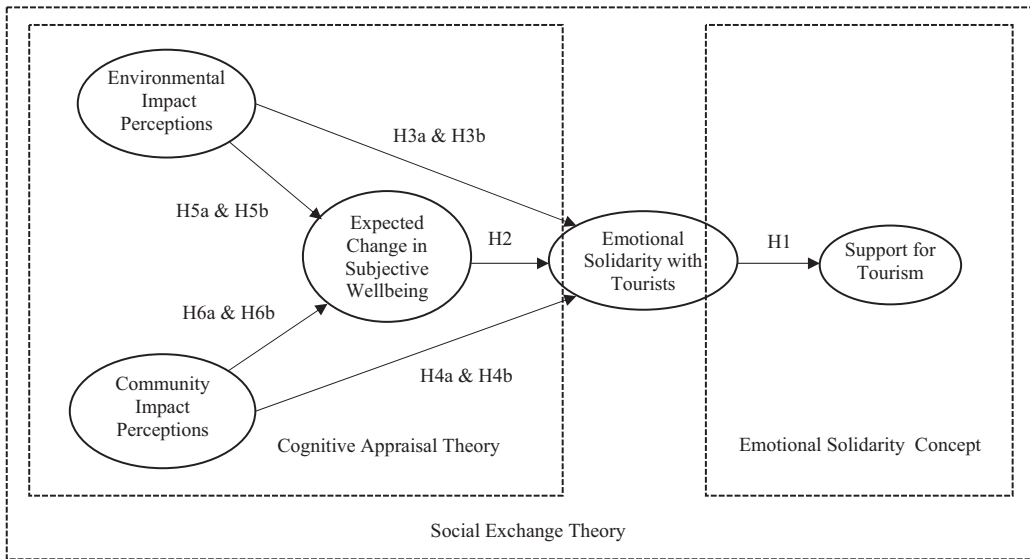


Figure 1. Research model.

**Support for tourism: the SET perspective**

SET, according to Ap (1992), is a sociological theory that aims to explain the exchange of resources between people through interaction. In tourism studies, SET provides a conceptual base through which “inter-relationships among perceptions of costs and benefits, positive and negative impacts, and support for tourism” are explored (Ward & Berno, 2011). Undoubtedly, SET remains a dominant lens through which researchers examine determinants of residents’ support for tourism (e.g. Allen et al., 1993; Boley et al., 2014; Nunkoo & So, 2016). Studies applying SET show that perceptions of positive impacts (e.g. jobs and income) and negative tourism impacts (e.g. tourism-induced crime and pollution) often predict overall support for tourism. For example, efforts to minimize negative impacts and maximize benefits likely results in positive interactions between residents and tourists, which arguably strengthen tourism support (McGehee & Andereck, 2004). Tourism benefits are more likely than negative issues to be associated with positive support for tourism (Nunkoo & So, 2016). Similarly, residents who experience any adverse effects from tourism (e.g. overcrowding of social services) are less likely to support tourism (Andereck et al., 2005). Studies applying SET across multiple geographical contexts have sufficiently supported existence of the relationship between perceptions of tourism impacts and overall tourism support (Boley et al., 2014; Nunkoo & Ramkissoon, 2012; Nunkoo & So, 2016). However, knowledge of the cognitive process through which such an exchange-based transactional relationship occurs remains inconclusive (Nunkoo & So, 2016; Sharpley, 2014; Zheng et al., 2019a, 2019b). Therefore, given that the relationship between perceived tourism impacts and support is established knowledge, this article focuses on understanding the underlying cognitive factors (e.g. perceived impacts of tourism, perceived effect of tourism on wellbeing, and ES) likely involved in the exchange process. CAT and the ES concept are introduced next in support of the hypothesized relationships.

**Emotional solidarity concept**

Although many researchers apply SET in tourism attitude studies, other studies challenge SET’s ability to fully explain tourism support (Boley et al., 2014; Nunkoo & So, 2016; Sharpley, 2014). Some studies indicate that the exchange relationship argument likely misses the role of

intangible factors involved in the exchange. For example, one study indicates that the psychological benefits of tourism have positive relationship with tourism support (Boley et al., 2014). Another identifies how ES (i.e. welcoming nature and sympathetic understanding dimensions) significantly predicts tourism support (Woosnam, 2012). These empirical findings validate Sharpley's (2014) criticism of the utility of SET in explaining support for tourism. Remedial efforts have since emerged in the literature (e.g. Boley et al., 2014; Erul et al., 2020; Nunkoo & Ramkissoon, 2009, 2012; Nunkoo & So, 2016; Woosnam, 2012). These studies conceptually and empirically demonstrate the value of employing alternative theoretical frameworks to address the exchange process's complexity in tourism attitude studies. Among the emerging and popular alternative frameworks applied to understand support for tourism is the concept of ES (e.g. Erul et al., 2020; Joo et al., 2018; Maruyama et al., 2019; Woosnam, 2012; Woosnam et al., 2009).

The ES concept is drawn from sociology and applied in studies aimed to examine the feeling of togetherness and sense of emotional bond between people (Woosnam & Norman, 2009). The concept is rooted in Durkheim's (1915) theory of affective bonds between people formed through interactions, shared beliefs, and behaviors (Woosnam & Norman, 2010). Woosnam et al. (2009; Woosnam & Norman, 2010) introduced the ES concept to tourism studies and argued that understanding residents' feelings about tourists could enhance knowledge about residents' overall support for tourism. Tourism attitude studies that apply the ES concept argue that residents who: (a) welcome tourists, (b) feel a close bond with tourists, and (c) sympathize with tourists are typically open-minded, interested in tourism, and therefore, likely to support tourism development (Moghavvemi et al., 2017; Phuc & Nguyen, 2020; Woosnam, 2012). As a result, the following hypothesis is tested:

*Hypothesis 1(H1):* ES will predict support for tourism. A high level of ES will relate to greater support, whereas less ES will relate to less support.

### ***The cognitive appraisal theory perspective***

The concept of ES, as noted earlier, represents feelings of identification and bonding with tourists (Woosnam & Norman, 2010). According to cognitive psychology, feelings result from emotions emerging from the mental processing of information associated with events (e.g. tourism) or people (e.g. tourists) (Skavronskaya et al., 2017). CAT provides a framework for understanding how emotions are formed (Lazarus, 1991; Smith & Lazarus, 1993; Watson & Spence, 2007). Cognitive psychologists argue that emotions are outcomes of a cognitive appraisal process wherein individuals evaluate the positive or negative impacts of a particular stimulus (e.g. an event such as tourism or people such as tourists) on wellbeing (Lazarus, 1991). Emotions are also responses to harmful or beneficial events that trigger adaptive behavior, such as reacting positively to tourists (Smith & Lazarus, 1993). The cognitive appraisal of an event's positive and negative characteristics is defined as outcome desirability (Watson & Spence, 2007). In the tourism studies context, outcome desirability of tourism events or tourist interactions with residents is appraised by evaluating tourism impacts (Zheng et al., 2019a, 2019b). Outcome desirability represents the initial step of the appraisal, wherein individuals make determinations about event characteristics relative to the appraiser's wellbeing (Watson & Spence, 2007). Following the outcome desirability appraisal (e.g. how tourism impacts affect one's wellbeing), an emotional reaction occurs (e.g. ES), which then elicits adaptive behavioral responses that are most likely to sustain benefits from the stimuli (e.g. a decision to support for tourism or not) (Watson & Spence, 2007).

An individual's emotional reaction to tourism (as an event) or interaction with tourists is determined by how that individual's wellbeing is affected by the event or interaction (Smith & Lazarus, 1993). This effect depends on the individual's wellbeing goal relevance and congruence (Smith & Lazarus, 1993). For example, tourism may prove relevant if an individual perceives job creation role of tourism to be important. Tourism is congruent when there is a directional match

between the event and wellbeing (e.g. an individual who values an increase in jobs and tourism generates the increase). In contrast, if an individual cares about environmental conservation and wants conservation to be sustained, but perceives that tourism negatively impacts conservation, that aspect would be relevant, but incongruent. Additionally, if tourism increased performing arts in the community, but the individual did not care about performing arts, that aspect would not be relevant. These examples represent one of the two critical factors underlying the cognitive appraisal process. That is, the appraised event or situation (e.g. perception of tourism impacts) ought to be relevant to one's wellbeing (e.g. expectation that the event will improve wellbeing) to produce positive emotions toward tourism or tourists (Smith & Lazarus, 1993). This argument supports emerging studies in the literature that connect perceptions of tourism impacts, wellbeing, and emotional reactions to tourism (e.g. Lai et al., 2020; Ouyang et al., 2017; Phuc & Nguyen, 2020; Zheng et al., 2020). However, empirical studies also document evidence of a direct relationship between tourism impacts and ES that is not mediated by the perceived impact on wellbeing (e.g. Phuc & Nguyen, 2020).

The second critical factor underlying the cognitive appraisal process is the efficacy-oriented adaptation behavior elicited by an emotional reaction to the outcome desirability appraisal (e.g. a decision to support tourism following the positive appraisal that tourism benefits an individual) (Smith & Lazarus, 1993). This argument supports the proposition that the outcome desirability appraisal process produces emotional reactions about tourism or tourists, potentially resulting in the decision to support tourism. Emotions may play a role in the relationship between cognitive appraisal of tourism and adaptive behavior to optimize or maintain the appraised benefits through support for tourism (Hasani et al., 2016; Nyer, 1997). Thus, the following hypotheses are tested:

*Hypothesis 2 (H2):* Expected change in subjective wellbeing from tourism growth predicts ES. The likelihood of having positive feelings about tourists is higher when residents expect a more positive change in subjective wellbeing from tourism growth.

*Hypothesis 3 (H3):* Positive (H3a) and negative (H3b) perceptions of environmental impacts from tourism predict ES. Perceived positive environmental impacts are likely to increase with residents' ES, whereas perceived negative environmental impacts are likely to decrease with ES.

*Hypothesis 4 (H4):* Positive (H4a) and negative (H4b) perceptions of community impacts from tourism predict ES. Perceived positive community impacts are likely to increase with residents' ES, whereas perceived negative community impacts are likely to decrease with ES.

*Hypothesis 5 (H5):* Positive (H5a) and negative (H5b) perceptions of environmental impacts from tourism predict expected changes in subjective wellbeing from tourism growth. Perceived positive environmental impacts are likely to increase with positive changes in subjective wellbeing expected from tourism, whereas perceived negative environmental impacts are likely to decrease with positive changes expected from tourism.

*Hypothesis 6 (H6):* Positive (H6a) and negative (H6b) perceptions of community impacts from tourism predict expected changes in subjective wellbeing from tourism growth. Perceived positive community impacts are likely to increase with positive changes in subjective wellbeing expected from tourism, whereas perceived negative community impacts are likely to decrease with positive changes expected from tourism.

## Methods

### Study region

Data were obtained from a survey of residents in Oregon (USA) during the summer of 2018. Tourism is one of Oregon's critical economic sectors, with an average annual growth in tourism earnings estimated at approximately 6% over the past 10 years (Dean Runyan Associates, 2018). In 2018, travel spending in Oregon increased by approximately 4% and generated approximately \$12 billion (Dean Runyan Associates, 2018). In the same year, Oregon's tourism employment increased by approximately 3% and tax revenue increased by approximately 6% (Dean Runyan

Associates, 2018). Oregon policymakers, tourism management companies, marketing institutions, and the private sector hope to optimize tourism's potential to impact Oregonians positively. However, a limited understanding of the level of support for tourism and its determinants exists throughout the state.

### Data collection

This study's sample included residents across all seven tourism regions in Oregon (Central, Coast, Eastern, Mt. Hood, Portland, Southern, Willamette Valley; Figure 2). Data were obtained from questionnaires administered: (a) to an online Qualtrics panel ( $n = 728$ ; 19% response rate; complete responses from each of the seven tourism regions ranged from  $n = 87$  to 124), and (b) by mixed-mode mail-based sample with paper and online completion options ( $n = 749$ , 18% response rate; complete responses from each of the seven regions ranged from  $n = 97$  to 123). Online and mail survey data were obtained between June and September 2018. A Qualtrics panel is an online opt-in survey that is becoming increasingly popular and cost-effective for collecting data (Brandon et al., 2014). Data from the Qualtrics panel used several attention checks to minimize potential measurement bias. The mixed-mode mail survey sample was obtained using a stratified random sampling approach (e.g. a random sample of addresses from within each of the seven tourism regions). This sample was collected using a modified mixed-mode design following Dillman et al. (2014) guidelines. First, a pre-notification letter with a link to complete the questionnaire online was mailed to the sample. Two weeks later, a full packet (questionnaire, letter, postage-paid reply envelope) was mailed to potential participants. Subsequent mailings included a reminder postcard and another full packet. The obtained data from both Qualtrics panel and mixed-mode mail survey were combined to address differences in demographic characteristics and ensure that demographic distribution in the data is closely aligned to the US census data on the population of Oregon. Additionally, the data was weighted by gender, age, and education to address the remaining differences between the sample and population. The total sample size was 1477 residents. Given that about 80% of the mail survey sample did not return a completed questionnaire, a telephone nonresponse bias check was conducted with a random sample of 98 nonrespondents, asking them nine questions from the questionnaire (Vaske, 2019). There were no substantive differences between respondents and nonrespondents, as all effect size statistics were small (Cohen, 1988) with an average of 0.07 (ranging between 0.02 and 0.20), which indicates that the obtained responses were not significantly different from responses we would have obtained from nonrespondents (Vaske, 2019).

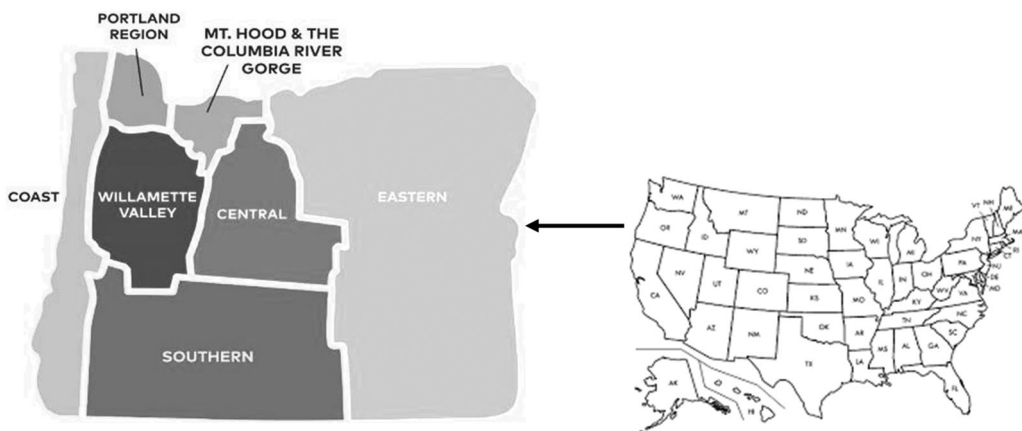


Figure 2. Location of the seven tourism regions in Oregon (Source: Travel Oregon).

## Measures

Measures utilized for this study were adapted from the available scales in the literature. Measures for the residents' support for tourism construct were adapted from Boley et al. (2014). Five statements in the questionnaire measured tourism support (e.g. "I believe tourism should be actively encouraged in my community"). Each of these statements was rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree). Measures for ES were adapted from Woosnam (2012) and Moghavvemi et al. (2017). These measures encompassed items representing welcoming nature, emotional closeness, and sympathetic understanding aspects of ES, as shown in Table 2. Similarly, statements representing these items were rated on a 5-point scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Measures for the perceived change of subjective wellbeing construct (i.e. the perceived change in subjective wellbeing expected from a hypothetical increase of tourism by about 20%) included five statements representing the overall evaluation of the quality of life and five dimensions of subjective wellbeing, including satisfaction with financial, social, community, recreation, and environmental conditions. These measures were adapted from Kim et al. (2013) and Organization of Economic Cooperation and Development (2013). Perceived change in subjective wellbeing perceptions expected from an increase in tourism were measured by asking participants to respond to how each of the dimensions of subjective wellbeing would change if community tourism increased by 20%. The statements shown in Table 2, representing the perceived change in subjective wellbeing, were rated on a 5-point scale that ranged from 1 (decrease a lot) to 5 (increase a lot). Finally, measures for community and environmental impacts of tourism were adapted from the literature (e.g. Nunkoo & Ramkissoon, 2011; Vargas-Sánchez et al., 2009).

## Data analysis

Data analysis was conducted in the EQS software package (version 6.1). The analysis involved a two-step process. The initial process involved conducting a confirmatory factor analysis (CFA) to assess the reliability and validity of the measures for constructs in the research model. The second step involved conducting structural equation modeling (SEM) following the confirmation of reliability and validity of measures in the best fitting measurement model through CFA. Both phases followed guidelines outlined by Byrne (2006). During model estimation in CFA, missing data were imputed using the expectation-maximization (EM) procedures argued to be the most appropriate SEM approach for addressing missing data (Little & Rubin, 1989). A weighting variable accounting for differences in age, education and gender between the sample and population was included in the model specification options before running the CFA model. The initial assessment of a CFA model revealed a Mardia's coefficient that is greater than 5, which suggests multivariate non-normally distributed data (Byrne, 2006). Following Byrne's guidelines, citing Satorra and Bentler (1988), the model estimation in CFA and structural equation modeling was based on robust statistics (i.e. Satorra-Bentler scaled statistics), which adjusted for non-normal data.

Additionally, several tests were implemented to account for a common method bias (CMB) issue in social science survey instruments that can create measurement error (Podsakoff et al., 2003). First, the Harman single factor test was conducted using exploratory factor analysis without rotation. A single factor model explained 15.4% of the variance, which indicates the absence of CMB. However, given some criticisms of Harman's approach (e.g. Podsakoff et al., 2003), a common method factor was added to the measurement model to test for CMB presence using a chi-square difference test. Finally, a chi-square difference test was conducted to confirm discriminant validity of measures out of caution (Gerbing & Anderson, 1988).

## Results

### Measurement model

The CFA was conducted before hypotheses testing to examine the constructs' psychometric properties in the research model. Results of the initial output revealed a somewhat poor model fit (S-B  $\chi^2$  ( $N=1474$ ,  $df=593$ ) = 1918.52,  $p < .001$ , Comparative Fit Index [CFI] = .89, Root Mean-Square Error of Approximation [RMSEA] = .039). Byrne's (2006) suggested procedure of identifying and addressing misfitting parameters in CFA was performed (i.e. removing significant cross-loadings, specifying significant error covariances, removing low standardized loadings below .60) (Byrne, 2006). Four items representing the ES construct with significant cross-loading on the support for tourism construct were dropped. One item, "expected change in satisfaction with the environment," was also dropped due to significant cross-loading on another factor. One significant error covariance was specified between two items, "increased opportunities for cultural activities in my community" and "creating more support for the preservation of historic buildings in my community." These changes improved the model fit (S-B  $\chi^2$  ( $N=1474$ ,  $df=412$ ) = 1008.92,  $p < .001$ , CFI = .946, RMSEA = .031). A CMB test was performed out of precaution to minimize the potential effect of measurement error in hypotheses testing. A common method factor was added to the model, and a chi-square difference test was performed to compare a constrained and unconstrained model. The chi-square difference test was statistically significant, suggesting the likely presence of shared variance ( $\Delta$ S-B  $\chi^2$  = 3098.39,  $\Delta$ df = 28,  $p < .001$ ) Thus, the common method factor was retained for subsequent analyses and the model fit of the measurement model was improved (S-B  $\chi^2$  ( $N=1474$ ,  $df=328$ ) = 729.57,  $p < .001$ , CFI = .959, RMSEA = .029) compared to the measurement model without the common method factor (S-B  $\chi^2$  ( $N=1474$ ,  $df=412$ ) = 1008.92,  $p < .001$ , CFI = .946, RMSEA = .031).

The retained common factor measurement model showed evidence of convergent validity, as indicated in Table 2 and 3. The standardized loadings for all construct measures were statistically significant and ranged between .70 and .93, which is at or above the recommended value of .70 (Fornell & Larcker, 1981). The amount of variance extracted (AVE) ranged between .56 and .78, above the recommended value of .50 (Hair et al., 2010). Construct reliability ranged between .84 and .95, which is above the recommended value of .70 (Hair et al., 2010). Table 1 shows that discriminant validity was violated for the positive tourism impact construct with ES, and positive environmental impact constructs. A similar discriminant validity issue for the positive tourism impact construct and other closely related constructs has been noted previously in the literature (Boley et al., 2014). Discriminant validity may not be of concern in this case given that item and construct reliability values exceeded the goal of .70, and the amount of variance extracted by these scales was substantially higher than the goal of .50 (Boley et al., 2014). Out of precaution, the chi-square difference test approach was used to verify the discriminant validity violation finding. A fully constrained measurement model (i.e. factor correlations fixed to 1) was compared to a freely estimated model (Gerbing & Anderson, 1988; Joo et al., 2019; Nunkoo & So, 2016). The latter revealed a better model fit, confirming the discriminant validity of measures used.

Table 1. Discriminant validity test.

	CR	AVE	1	2	3	4	5	6	7
Support for tourism	.95	.78	<b>.88</b>						
Emotional solidarity	.90	.63	.85	<b>.80</b>					
Expected change in subjective wellbeing	.89	.61	.76	.71	<b>.78</b>				
Positive environmental impacts	.87	.77	.71	.73	.65	<b>.88</b>			
Negative environmental impacts	.91	.77	-.16	.07	-.05	-.18	<b>.88</b>		
Positive community impacts	.84	.56	.76	.82	.73	.80	-.03	<b>.75</b>	
Negative community impacts	.90	.70	-.21	-.13	-.14	-.24	.76	-.08	<b>.84</b>

Note: Diagonal values are the square root of the average variance extracted (AVE), values below diagonal are factor correlations, CR: construct reliability. Correlations above the associated square-root of AVE for any two constructs violates discriminant validity (Fornell & Larcker, 1981).



**Table 2.** Confirmatory factor analysis (dependent variables).

Construct and associated items	Mean	SD	$\lambda$	Critical Ratio	Construct Reliability	AVE
<b>Support for tourism</b>					.95	.78
In general, the positive effects of tourism in my community outweigh its negative effects	3.83	1.10	.87	N/A		
I believe tourism should be actively encouraged in my community	3.89	1.12	.93	37.66		
I do not want tourism in my community <sup>R</sup>	3.96	1.18	.85	35.19		
My community should support the promotion of tourism	3.88	1.09	.91	30.91		
Tourism helps my community grow in the right direction	3.52	1.16	.84	32.18		
<b>Emotional solidarity</b>					.90	.63
I feel comfortable with some tourists I have met in my community	3.82	0.49	.79	21.72		
I feel positive about my daily encounters with tourists	3.56	0.94	.87	N/A		
I do not identify with tourists in my community <sup>R</sup>	3.37	1.08	.75	28.60		
I have a lot in common with tourists in my community	3.12	0.98	.78	34.54		
I feel affection towards tourists in my community	3.02	0.98	.79	30.13		
<b>Perceived changes in subjective wellbeing<sup>a</sup></b>					.89	.61
Increase in the number of tourists in your community by 20% in the near future, with potential for both positive and negative effects would decrease, have not affected, or increase your wellbeing on ...						
Your life overall	2.91	0.87	.81	N/A		
Your financial situation	3.01	0.77	.70	17.55		
Your social life beyond family	3.14	0.78	.79	24.71		
Your community and its culture	3.27	1.04	.83	30.33		
Your recreation opportunities	3.30	1.05	.79	25.18		

Note: Scale: 1 = strongly disagree, 2 = disagree, 3 = neither, 4 = agree, 5 = strongly agree.

<sup>a</sup>Scale for perceived change in wellbeing construct 1 = decrease a lot, 2 = decrease a little, 3 = no effect, 4 = increase a lot, 5 = Increase a lot.

AVE: average variance extracted;  $\lambda$ : Standardized loading; SD: standard deviation; R: Item was reverse coded prior to analysis.

### Structural model

Validation of the measurement model paved the way for the SEM to test hypotheses 1 through 6. The structural model revealed adequate model fit indices, according to Byrne (2006), CFI was .951, and RMSEA was .031. As shown in Table 4, most of the hypothesized relationships were supported. Hypothesis 1 (ES predicts support for tourism) was supported ( $\beta = .88, p < .001$ ). Similarly, hypothesis 2 (the expected change in subjective wellbeing from an increase in tourism predicts ES) was also supported ( $\beta = .28, p < .001$ ).

Hypothesis 3 stated that perceived environmental impacts of tourism directly predicts residents' ES. Hypothesis 3a (perceived tourism's positive environmental impacts directly and strongly predict residents' ES) was supported ( $\beta = .17, p < .01$ ). However, hypothesis 3b (perceived tourism's negative environmental impacts predict ES) was not supported ( $\beta = -.03, p > .05$ ).

Hypothesis 4 stated that perceived community impacts of tourism predict ES. Hypothesis 4a (perceived positive community impacts from tourism predict ES) was supported ( $\beta = .50, p < .001$ ). However, hypothesis 4b (perceived negative community impacts strongly predicted ES) was not supported ( $\beta = -.02, p > .05$ ).

Finally, hypotheses 5 and 6 stated that perceived environmental and community impacts of tourism predict expected changes in subjective wellbeing from increased tourism. Hypothesis 5a (perceived positive environmental impacts from tourism would predict the expected changes in

**Table 3.** Confirmatory factor analysis results (predictor variables).

Construct and associated items	Mean	SD	$\lambda$	Critical ratio	Construct reliability	AVE
<b>Positive environmental impact</b>					.87	.77
Tourism contributed to ...						
Greater protection of the natural environment in my community	2.88	1.06	.85	N/A		
Improving the natural appearance of my community	3.10	1.08	.91	35.81		
<b>Negative environmental impact</b>					.91	.77
Tourism has contributed to ...						
Degradation of wildlife habitat in my community	2.83	1.08	.82	N/A		
Air pollution in my community	2.73	1.02	.90	23.21		
Water pollution in my community	2.69	1.03	.93	22.98		
<b>Positive community impacts</b>					.84	.56
Tourism has contributed to ...						
Better infrastructure (e.g. roads) in my community	2.88	1.10	.71	N/A		
Greater knowledge of other cultures in my community	3.26	1.09	.76	24.27		
Increased opportunities for cultural activities in my community	3.26	1.04	.77	24.06		
Creating more support for preservation of historic buildings in my community	3.25	1.02	.75	21.73		
<b>Negative community impacts</b>					.90	.70
Tourism has contributed to ...						
Problems of sharing resources or public spaces between residents and tourists in my community	2.91	1.09	.83	N/A		
Loss of tranquility in my community	2.82	1.10	.90	29.96		
Unpleasant overcrowding in my community	2.80	1.16	.88	31.57		
Increasing crime in my community	2.75	1.08	.74	25.58		

Note: Scale: 1 = strongly disagree, 2 = disagree, 3 = neither, 4 = agree, 5 = strongly agree.

AVE: average variance extracted;  $\lambda$ : standardized loading; SD: standard deviation; R: item was reverse coded prior to analysis.

**Table 4.** Hypothesis testing results from a structural model.

Hypotheses		Standardized coefficients	Critical ratio	Conclusion
H1	Emotional solidarity → Support for tourism	.88***	30.22	Support
H2	Expected change in subjective wellbeing → Emotional solidarity with tourists	.28***	6.29	Support
H3a	Positive environmental impact → Emotional solidarity	.17**	2.70	Support
H3b	Negative environmental impacts → Emotional solidarity	-.03	-.76	No support
H4a	Positive community impact → Emotional solidarity	.50***	6.32	Support
H4b	Negative community impacts → Emotional solidarity	-.02	-.51	No support
H5a	Positive environmental impact → Expected change in subjective wellbeing	.16*	2.28	Support
H5b	Negative environmental impacts → Expected change in subjective wellbeing	.08	1.57	No support
H6a	Positive community impact → Expected change in subjective wellbeing	.59**	7.46	Support
H6b	Negative community impacts → Expected change in subjective wellbeing	-.12*	-2.20	Support

Note: \*\*\* $p < .001$ , \*\* $p < .01$ , \* $p < .05$ ; R-square (support for tourism) = .78; R-square (emotional solidarity) = .76; R-square (perceived change in subjective wellbeing) = .55.

subjective wellbeing) was supported ( $\beta = .16, p < .05$ ). However, hypothesis 5b (perceived negative environmental impacts from tourism would predict the expected changes in subjective wellbeing) was not supported ( $\beta = .08, p > .05$ ). Surprisingly, however, the relationship was positive. Hypothesis 6a (the perceived positive community impacts from tourism would predict the expected changes in subjective wellbeing) was supported ( $\beta = .59, p < .001$ ). Similarly, hypothesis 6b (perceived negative community impacts from tourism would predict the expected change in subjective wellbeing) was also supported ( $\beta = -.12, p < .05$ ).

## Discussion

This article contributes to understanding the relationship between ES and support for tourism and the links between perceived tourism impacts, effect of tourism on wellbeing, and ES. The results show that Oregon residents' ES is a strong predictor of support. This finding is consistent with previous empirical studies that show ES is strongly and positively related to support for tourism (Erul et al., 2020; Ouyang et al., 2017; Phuc & Nguyen, 2020; Woosnam, 2012). This study adds to this body of knowledge by explaining that the relationship between ES and tourism support is more substantial than previously reported in the literature (Erul et al., 2020; Woosnam, 2012). The empirical evidence that ties emotional reaction to tourism support is not surprising when considering the argument from a CAT perspective. Efficacy-based adaptive behavior (e.g. tourism support) aims to improve or sustain benefits that stimulate the emotional reactions responsible for that behavior (Smith & Lazarus, 1993). This type of self-interest preserving behavior results from an outcome desirability assessment of the stimuli (i.e. tourism impact), conceptually explained by CAT (Lazarus & Smith, 1988). Joo and Woosnam (2020), while citing Lawler's work (e.g. Lawler et al., 2000), show that emotional reactions shape perceptions and behaviors.

One of this study's primary goals was to understand the determinants of residents' positive emotional reactions to tourists. This knowledge gap has been acknowledged in the literature (Joo & Woosnam, 2020; Zheng et al., 2020). Informed by CAT, this study reveals that residents' perceived tourism impacts may affect their ES either directly or through changes in subjective wellbeing. This finding suggests that the addition of change in subjective wellbeing in the model predicting ES contributes to understanding the factors predicting ES, which arguably predicts support for tourism. The effect of positive community impacts of tourism on ES is greater in magnitude and significance than the effect of positive environmental impacts.

Furthermore, the results show that the effect of positive tourism impacts on ES is more important than negative impacts. From a CAT perspective, community impacts are more relevant than environmental impacts, whereas congruent (i.e. positive) impacts are more likely to affect ES and subjective wellbeing than incongruent (i.e. negative) impacts. These findings support the outcome desirability appraisal argument outlined in CAT, which indicates that residents' decisions to support tourism are likely stimulated by how tourism positively impacts an individual's wellbeing to elicit a positive reaction toward tourists and tourism.

The relatively weak adverse relationship between perceived negative community impacts and perceived changes in wellbeing from an increase in tourism is notable. This finding indicates that perceptions of negative impacts of tourism are less likely to predict residents' support for tourism through the appraisal processes, shaping tourism support perceptions and behaviors. As Ouyang et al. (2017) indicate, negative tourism impacts have a weaker effect on support than positive impacts and other variables (e.g. emotions). Together, these results show that perceptions of negative tourism impacts may not be critical in the cognitive process of exchange, thus, shaping decisions about supporting tourism. This finding may explain a typical weak relationship between negative perceptions of tourism impacts and tourism support, commonly seen in tourism attitude studies framed with SET (Kim et al., 2013; Nunkoo & So, 2016). A possible explanation for such a weak role of perceived negative impacts in models explaining support could be

that people are more likely to cognitively minimize negative impact perceptions and amplify positive impacts while cognitively appraising tourism effects (Chancellor et al., 2011; Nunkoo & Ramkissoon, 2012; Ouyang et al., 2017).

Furthermore, the results revealed that perceived changes in subjective wellbeing expected from an increase in tourism are mainly a function of perceptions of: (a) positive community tourism impacts, (b) positive environmental tourism impacts, and (c) negative community tourism impacts. The positive community impacts of tourism have the most significant effect on perceived changes in wellbeing expected from increased tourism. Together, these results show that positive impacts of tourism on the community and environment, and the negative impacts on the community, are essential determinants of ES, either directly or through the appraisal of how such impacts affect one's wellbeing. There is support for these findings in the literature (Joo et al., 2018; Ouyang et al., 2017; Phuc & Nguyen, 2020). For example, Phuc and Nguyen (2020) show that the perceived value of tourism (e.g. income generation) directly and strongly predicts ES among residents of Ho Chi Minh City, Vietnam. Ouyang et al. (2017) also reveal that tourism costs are strong determinants of negative emotions influencing support for hosting the 2014 World Cup event in Brazil. Lai et al. (2020) reveal that perceived tourism impacts have a substantial direct effect on wellbeing. Improved wellbeing is also a strong determinant of ES among Macau residents in China.

The findings of this study and the available empirical evidence in the literature support the utility of CAT in conceptualizing and evaluating factors involved in SET-based transactional exchanges that shape residents' support for tourism. This study shows that CAT can provide an integrative theoretical framework linking perceptions of tourism impacts to support through an outcome desirability cognitive appraisal process. This integrative cognitive psychology theory may be useful in studies exploring links between tourism impacts, wellbeing, ES, and residents' support for tourism (e.g. Lai et al., 2020). Additionally, cognitive psychology theories are likely to benefit tourism researchers (Skavronskaya et al., 2017). Studies applying CAT to understand tourism attitudes are emerging (Ouyang et al., 2017; Zheng et al., 2019a, 2019b), but knowledge of its utility is more limited. Studies exploring the links between perceived tourism impacts and support can no longer ignore the role of outcome desirability cognitive appraisal processes likely responsible for the efficacy-based adaptive decision to support behavior (Zheng et al., 2019a, 2019b). Future attempts to integrate CAT into SET-based tourism attitude studies can provide better explanations of the processes involved in the exchange, thereby addressing SET's inability to fully explain residents' support for tourism (Sharpley, 2014).

### ***Limitations and future research direction***

There are several limitations to be acknowledged. First, the study was conducted in the summer when tourist numbers are generally high. Thus, the potential effect of social conflict on residents' perceptions of tourists and tourism is likely, but was not controlled for in this study. Tourism increases may create social conflict due to the overuse of environmental and social resources (Jin & Pearce, 2011). Future research may address this by ensuring that data collection occurs across all seasons. Second, online Qualtrics panel data and mail survey data were combined in the analyses. Despite efforts such as determining if statistical differences exist in responses and weighting data by age and gender, the potential effect of the difference in data collection modes is possible, but was not controlled for in the analysis. Future research may address this gap by exploring if data collection modes affect the relationships tested in this study. Third, according to the literature (Sharpley, 2014), residents' perceptions of tourism are shaped by extrinsic factors (e.g. the stage of tourism development and nature of tourism) and intrinsic factors (e.g. economic dependency on tourism and the distance from tourism areas). For example, residents with economic dependency on tourism may be relatively more supportive of tourism

than residents without such dependency (Nunkoo & Ramkissoon, 2011). The potential effect of extrinsic and intrinsic factors in this study was not examined, and future research should address this issue. Fourth, a one-factor concept of ES was used in this study's model. However, ES may be a three-dimensional concept, according to Woosnam (2010). Future research could improve knowledge by examining how the three dimensions of ES are shaped by the cognitive appraisal of tourism's impact on wellbeing.

This study also revealed findings that are worth exploring in future research. For example, the perceptions of community tourism impacts and positive environmental impacts appear to be important factors in the cognitive appraisal process evaluating the effect on wellbeing and stimulating residents' emotional reaction to tourists and tourism support compared to negative environmental impacts. However, according to Schüller et al. (2009), goal incongruence (i.e. perceived negative environmental impact) is expected to have a strong adverse effect in the cognitive appraisal process eliciting ES. More research is needed to understand why environmental goal incongruence plays a minimal role in the mental appraisal of tourism's impact on wellbeing. Furthermore, this study revealed that community impacts of tourism are essential cognitions in the appraisal of tourism. However, community impacts encompass social and economic aspects (Andereck & McGehee, 2008). Future research could explore whether there are differences in how social and economic impacts of tourism influence the cognitive appraisal process that determines residents' emotional reaction and support for tourism. Finally, this research, guided by CAT, has demonstrated that subjective wellbeing and ES play a role in the exchange-based relationship between perceived tourism impacts and support for tourism. Thus, integrating SAT and CAT is likely to improve understanding of the nature of the exchange process, thereby improving understandings of what shapes residents' support for tourism. Additional empirical research that integrates both theories is needed across multiple geographical contexts to confirm the utility of integrating CAT and SET in tourism studies.

## Conclusion

Sustainable tourism development and management organizations rely on residents' support in host communities (Nunkoo & Ramkissoon, 2012). A number of studies exploring the factors that determine support for tourism, conceptually framed by the SET, have advanced knowledge that perceptions of tourism impact strongly predict residents' support for tourism (e.g. Gursoy et al., 2016; Moghavvemi et al., 2017; Nunkoo & Ramkissoon, 2012; Nunkoo & So, 2016). Despite criticism of SET limitations, the literature on tourism attitudes is experiencing growth from efforts to integrate other theories aimed to understand the process of exchange producing support for tourism (e.g. Boley et al., 2014; Nunkoo & Gursoy, 2012; Nunkoo & So, 2016; Ouyang et al., 2017; Woosnam, 2012; Zheng et al., 2019a, 2019b). Across a wide range of theoretical foundations informing these studies, the focus on understanding psychological factors such as ES, trust, identity, and others, likely involved in the process of exchange, is notable. However, as Zheng et al. (2020) argue, a systematic evaluation of psychological determinants of support for tourism informed by cognitive psychological theory is lacking, yet likely to advance knowledge of tourism support.

This study, along with recent contributions (e.g. Ouyang et al., 2017; Zheng et al., 2019a, 2019b), provides empirical evidence supporting the CAT's utility in explaining the outcome desirability process of appraising the determinants of support for tourism. This study has shown that perceived change in wellbeing expected from an increase in tourism, and emotional reaction to tourists, play a role in the relationship between perceived tourism impacts and residents' support for tourism. The study also indicates that perceived positive community tourism impacts are the most impactful stimulants in the appraisal process and are likely to positively shape mental evaluation of wellbeing and the emotional reaction eliciting support for tourism. These findings

raise several questions of research interest. For example, what risks exist within the outcome desirability appraisal process that may adversely affect tourism support, despite high levels of actual or perceived positive community impacts from tourism? What aspects of perceived positive community impacts from tourism are most likely to enhance support through a cognitive appraisal process? Is the pattern stable across varied geographical contexts for the outcome desirability appraisal process that elicits tourism support?

The practical implications of this study's findings are also noteworthy. The finding of a strong relationship between residents' ES and tourism support indicates that efforts to evaluate and develop actions to improve tourism support are best invested in programs that raise awareness about tourism benefits. Moreover, programs helping residents to understand the short-term and long-term positive benefits of tourism for the community are likely to improve how people feel about tourists. For example, asking residents how they feel about visitors at a local recreation site may indicate if residents are likely to support efforts to improve the site for tourism purposes.

The finding that perceptions of positive community impacts play an important role in the appraisal of tourism's impact on wellbeing shows that resources intended to enhance tourism support may be more effective if they create tourism-based wellbeing opportunities and educate residents about the value of such opportunities. Understanding residents' internal wellbeing needs and orienting tourism opportunities toward addressing such needs is essential for tourism planners and managers. Overall, based on this study's findings, sustainable tourism planning and management agencies may benefit from understanding the positive tourism impacts that residents most desire and those most likely to enhance wellbeing. Tourism agencies are likely to enhance support for tourism more efficiently when tourism impacts with most positive effect on wellbeing are understood and strengthened.

## Acknowledgments

The authors wish to thank the residents of Oregon who participated in this study. The authors are grateful to Dr. Manuel A. Ribeiro and Dr. Kyle M. Woosnam for guidance on earlier drafts and the anonymous reviewers for insightful comments. Finally, the authors wish to thank Ms. Lara Jacobs for providing copy-editing services.

## Disclosure statement

No potential conflict of interest was reported by the authors.

## Funding

This article was prepared with funding from Travel Oregon.

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