

## Revisiting residents' support for tourism development: The role of tolerance

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### ABSTRACT

This study revisits the topic of resident support and extends the conventional framework on social exchange theory. A conceptual model was developed by incorporating residents' tolerance for tourism development and tested based on survey data from 242 residents in Qinyan, China, an ancient town. Results indicate that residents' support for tourism was affected by perceived personal benefits and positive tourism impacts. Residents' tolerance for tourism played a significant moderating role in the relationship between perceived negative tourism impacts and support for tourism development. Residents with lower tolerance for tourism were more sensitive to negative tourism impacts and thus tended to express lower support for tourism development. Theoretical and managerial applications of these findings were also discussed.

### 1. Introduction

Residents' attitudes toward tourism development represent one of the most well-studied topics in tourism (Harrill, 2004; Wang & Pfister, 2008). The industry has been framed as a double-edged sword in that tourism development brings positive and negative impacts (Gursoy, Jurovski, & Uysal, 2002). Residents' perceptions of these potential effects can inspire active and passive attitudes toward destination development. As core stakeholders in tourism development, residents' related attitudes are crucial: their support for tourism development is closely tied to locations' tourism-related success and sustainability.

The framework of social exchange theory (SET) has been adopted in myriad studies to contextualize the associations between residents' perceived tourism impacts and their support for tourism (e.g., Eslami, Khalifah, Mardani, Streimikiene, & Han, 2019; Frleta & Jurdana, 2020; Kang & Lee, 2018). Scholars generally agree that residents' perceptions of positive tourism effects can induce support for tourism development (Eslami et al., 2019; Gursoy, Ouyang, Nunkoo, & Wei, 2019; Hadinejad, Moyle, Scott, Kralj, & Nunkoo, 2019). However, mixed results have been observed regarding the association between perceived negative impacts and support for tourism. Researchers have found that residents who do not anticipate benefiting from tourism development express less favorable attitudes toward local tourism, which undermines their tourism-related support (e.g., Ko & Stewart, 2002; Ribeiro, Pinto, Silva, & Woosnam, 2017). Other studies have identified no associations among residents' personal benefits, negative tourism impacts, and tourism

support (e.g., Nunkoo, 2015; Nunkoo & So, 2016; Rasoolimanesh, Ali, & Jaafar, 2018). It seems counterintuitive that residents who perceive negative impacts might still display proactive attitudes toward tourism development (Faulkner, Tideswell, Faulkner, & Tideswell, 1997; Kayat & Sharif, 2013). Several scholars have attempted to rationalize this unexpected outcome. Mansfeld and Ginosar (1994) proposed that there may be a threshold above which locals begin to express irritation and dissatisfaction with tourism development. Similarly, Ap and Crompton (1993) suggested that residents were capable of tolerating certain unpleasant facets of such development without feeling resentful.

These contradictory findings suggest that SET alone cannot explain residents' support for tourism development. The framework has accordingly been questioned in prior studies (e.g., Clifton & Benson, 2006; Erul, Woosnam, & McIntosh, 2020; Hadinejad, Moyle, Scott, Kralj, & Nunkoo, 2019). Some researchers have argued that SET-based explanations overly emphasize personal interests (i.e., personal rationality) while neglecting collective interests (i.e., collective rationality) (Chang, 2018; Clifton & Benson, 2006; Olson, 1971). To fill this research gap, personal rationality and collective rationality were integrated in the present study. The construct of residents' tolerance for tourism development, which represents collective rationality, was taken as a vantage point to offer a nuanced explanation of residents' attitudes toward tourism. It was presumed that the correlations among personal benefits, perceived tourism impacts, and support for tourism development would each inform residents' tolerance. Specifically, a conceptual model was constructed to depict the associations among residents'

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personal benefits, perceived tourism impacts, and support for tourism. This study also showcases how the strength of relationships involving the latter two characteristics can be affected by residents' tolerance.

## 2. Literature review and hypothesis development

### 2.1. Residents' support for tourism

Residents' support for tourism is essential to tourism destinations' sustainable development. First, residents are major players in tourist destinations (Easterling, 2004): their attitudes toward tourism development are extremely important, especially their active support, which is critical to successful, socially acceptable tourism development (Erul et al., 2020; Nunkoo & Gursoy, 2012; Nunkoo & So, 2016). Second, residents represent an attractiveness factor that can draw tourists' attention (Easterling, 2004). Residents' customs, culture, hospitality, and behavior can serve as attraction factors in a destination and constitute the basic components of a destination's tourism products. Therefore, residents' attitudes—more precisely their support for tourism development—strongly underpin tourism development.

Although most relevant studies have been descriptive and atheoretical (Hadinejad et al., 2019; Nunkoo, Smith, & Ramkissoon, 2013), Perdue, Long, and Allen (1990) developed a preliminary structural model investigating the influential factors of residents' support for tourism development based on SET. The authors specifically examined relationships among residents' characteristics, personal benefits, perceived impacts of tourism, and support for tourism development using data from several destinations in the U.S. state of Colorado. Results indicated that, when personal benefits were controlled, the perceived positive and negative impacts of tourism had no connection with residents' characteristics. Additionally, residents' support for ongoing tourism development was negatively (positively) associated with perceived negative (positive) impacts of tourism (Perdue et al., 1990). Ap (1992) later proposed a framework, taking the social exchange process as a theoretical basis to explore why residents might perceive tourism impacts positively or negatively. Many scholars have endeavored to understand residents' support for tourism based on SET (e.g., Dyer, Gursoy, Sharma, & Carter, 2007; Nunkoo & So, 2016). According to these studies, SET appears to be the most commonly adopted theory to explain locals' support for tourism development in tourist destinations (Eslami et al., 2019; Gursoy et al., 2019; Hadinejad et al., 2019; Martín, Moreira, & Román, 2020). Residents seem to evaluate tourism development on the basis of the expected benefits or costs of related services (i.e., social exchange). When residents consider an exchange to be personally advantageous, they assess the exchange positively and vice versa. Scholars have more recently asserted that SET alone cannot fully explain the antecedents shaping residents' attitudes (Chang, 2018; Rasoolimanesh, Jaafar, Kock, & Ramayah, 2015). Other theories have also been used to explain residents' attitudes, such as community-attachment theory and growth-machine theory (Harrill, 2004; Oviedo-Garcia, Castellanos-Verdugo, & Martín-Ruiz, 2008), the theory of emotional solidarity (Erul et al., 2020; Woosnam, 2012), self-perception theory (Woosnam, Draper, Jiang, Aleshinloye, & Erul, 2018), social dilemma theory (Smith, Ritchie, & Chien, 2019), cognitive appraisal theory (Zheng, Ritchie, Benckendorff, & Bao, 2019), and bottom-up spillover theory (Eslami et al., 2019). However, some reviews have confirmed that SET continues to be the preferred framework for elucidating residents' attitudes (Erul et al., 2020; Hadinejad et al., 2019).

According to the "rational man" assumption of SET, residents are likely to participate in exchanges to support tourism development as long as they expect tourism to help more than harm them (Ap, 1992; Nunkoo & So, 2016; Yoon & Joseph, 1999). As Comet (1967) stated, human beings have individual and social lives. Humans, as animals, have a "selfish instinct". The "social tendency" is also inherently irresistible, representing another human instinct (i.e., the "social instinct").

Thus, the notion of the "rational man" is characterized by duality, which includes individual and collective rationality (Bankston, 2003; Olson, 1971). Individual rationality refers to individuals seeking to maximize their own interests in social and economic spheres without considering the interests of other individuals or organizations; collective rationality refers to individuals' tendencies and motivations to maximize the interests of the larger society or group by prioritizing such interests (Hu & Wu, 2011; Sen, 1989). Notably, research on residents' support for tourism development has demonstrated that SET cannot fully explain residents' responses to tourism given the theory's focus on individual rationality, which pertains to residents' self-interest and lacks group-level thinking (Chang, 2018; Clifton & Benson, 2006; Rasoolimanesh et al., 2015). Researchers have therefore suggested that collective interest should be considered as well (Chang, 2018; Smith et al., 2019; Vargas-Sánchez, Plaza-Mejía, & Porras-Bueno, 2009). For example, Vargas-Sánchez et al. (2009) accounted for community-level features and classified them across four types and two levels (individual and community) based on residents' attitudes. Faulkner et al. (1997) pointed out that residents' responses to tourism development are not only determined by individual benefits but also by potentially broader community benefits. Smith et al. (2019) noted that the SET framework highlights the importance of evaluating personal costs and benefits, and that considering collective costs and benefits is necessary to account for the general impact on individuals' overall attitudes. As such, individual and collective rationality are integrated into the SET framework in this study to reveal the internal mechanism underlying residents' support for tourism.

### 2.2. Individual rationality based on social exchange theory

The "rational man" notion is widely accepted as a standard assumption in economics, and the "self-interest" interpretation of rationality is well established—it has been one of the central features of mainstream economic theories for centuries (Sen, 1989). Self-interest rationality, or individual rationality, emphasizes the assessment of personal costs and benefits, which is the sole motivating force and objective (Hu & Wu, 2011). This point of view is consistent with the basic assumption of SET. Therefore, in this section, residents' individual rationality is analyzed from a SET perspective in the tourism context.

Under SET, several antecedents have been identified as shaping individuals' support for tourism development. Weaver and Lawton (2001) split these antecedents into intrinsic and extrinsic factors. Harrill (2004) further outlined three attribute categories, namely socioeconomic factors, spatial factors, and economic dependency. Jackson and Inbakaran (2006) later succinctly classified various demographic, personal, social, and tourism-related factors. Among antecedent variables, residents' personal benefits and perceived tourism impacts have attracted considerable attention with respect to SET.

**Personal benefits generated through tourism development.** Perdue et al. (1990) devised a model to explain locals' support for tourism by incorporating two constructs (personal benefits and perceived tourism impacts) into the model as antecedent variables. Several additional models have depicted resident support based on SET-related antecedents (Kang & Lee, 2018; Ko & Stewart, 2002). Many studies have demonstrated that residents who stand to benefit from tourism development are more amenable to it and perceive the possible impacts of tourism more positively. For instance, Perdue, Long, and Kang (1995) applied a structural model based on that of Perdue et al. (1990) in order to comprehend residents' support for gambling tourism. They discovered that residents' anticipated personal benefits were significantly connected with the perceived impacts of gambling and support for gambling. Vargas-Sánchez, Oomdo Valle, da Costa Mendes, and Silva (2015) determined that residents who personally benefit from tourism development experience the favorable impacts of tourism more strongly and unfavorable impacts less strongly, culminating in highly positive attitudes towards tourism development. Kang and Lee (2018) also noted

that residents who perceive tourism development as personally beneficial are inclined to react positively to it and to support related activities as a result. Given these trends, the construct of residents' personal benefits can be assumed to be a significant influencing factor of residents' perceived tourism impacts as well as of their support for tourism.

**Perceptions of tourism impacts.** Research on perceived tourism impacts is closely linked to the effects of tourism in general. Because such impacts cannot be measured directly, researchers often evaluate them by assessing residents' perceptions of tourism effects in tourist destinations (Andereck & Vogt, 2000; Jafari, Pizam, & Florida, 1990). Researchers generally agree that tourism development brings positive and negative consequences (Chi, Ouyang, & Xu, 2018; Kang & Lee, 2018; Nunkoo & Gursoy, 2012; Nunkoo & Ramkissoon, 2012). Such impacts are thought to be threefold (economic, sociocultural, and environmental) and to span two dimensions (positive/negative or benefits/costs) (Martín, de losSalmonesSánchez, & Herrero, 2018; Styliadis, Sit, & Biran, 2014). Various studies have explored associations between the two variables of residents' perceived positive/negative tourism impacts and their support for tourism based on SET (Chi et al., 2018; Kang & Lee, 2018). The results of such work suggests that the stronger residents' perceived positive tourism impacts, the greater their support for tourism (Dyer et al., 2007; Gursoy & Kendall, 2006). Similarly, the stronger their perceived negative tourism impacts, the weaker their support (Nunkoo & Gursoy, 2012). The following hypotheses are proposed based on the concept of individual rationality:

**Ha1. Residents' personal benefits from tourism development (BEN) significantly and positively affect their perceived positive impacts of tourism (POS).**

**Ha2. Residents' personal benefits from tourism development (BEN) significantly and negatively affect their perceived negative impacts of tourism (NEG).**

**Ha3. Residents' personal benefits from tourism development (BEN) significantly and positively affect their support for tourism development (SUP).**

**Ha4. Residents' perceived positive impacts of tourism (POS) significantly and positively affect their support for tourism development (SUP).**

**Ha5. Residents' perceived negative impacts of tourism (NEG) significantly and negatively affect their support for tourism development (SUP).**

Among these five hypotheses, three have been supported in prior studies; Ha2 and Ha5 remain controversial. Scholars have come to different conclusions when using SET to probe the connections between personal benefits and perceived negative tourism impacts as well as between perceived negative tourism impacts and support for tourism development. Although SET appears to be the most useful theoretical framework for identifying residents' responses to tourism development (Kayat & Sharif, 2013; Nunkoo & So, 2016), researchers have acknowledged several theoretical deficiencies. On one hand, SET ignores the heterogeneity of local people and residents' change in the degree to which they may benefit from and/or accept the costs of tourism development (Easterling, 2004). On the other hand, given the "rational man" assumption, SET overemphasizes individual rationality by concentrating on residents' self-interest while ignoring community interests (Clifton & Benson, 2006; Faulkner et al., 1997). Because SET cannot fully explain residents' attitudes toward tourism development (Vargas-Sánchez, Porras-Bueno, & Plaza-Mejía, 2011), some researchers have suggested combining it with other theories to develop a clearer understanding of residents' attitudes toward tourism (Faulkner et al., 1997; Látková & Vogt, 2012). Therefore, this study incorporates residents' tolerance for tourism as a moderator based on collective interests (i.e., collective rationality) into Perdue et al.'s (1990) classic model to clarify residents' support for tourism development.

### 2.3. Collective rationality: Moderating role of tolerance

The self-interest perspective on rationality (i.e., individual rationality) is common in economics and has no shortage of empirical support. Scholars have pointed out that pursuing one's goals involves rationality, including the promotion of non-self-interested goals (Sen, 1989). Economic incentives are not the only viable ones; people can be motivated by other social and psychological objectives. Olson (1971) posited that rationality refers to individual and collective rationality. As noted, individual rationality emphasizes the pursuit of personal interests, while collective rationality entails collective common interests. Collective rationality may also be influenced by altruism, wherein people sacrifice personal interests for collective interests (Olson, 1971). However, studies on residents' support for tourism have primarily adopted SET and hence tended to ignore collective interests.

Faulkner et al. (1997) introduced altruism theory into tourism given SET's excessive focus on personal benefits. This concept implies that personal costs might be tolerated for the sake of extended community benefits. As members of tourist destinations, residents possess individual and collective rationality. Their tolerance for tourism development, which represents collective rationality, should therefore be considered when exploring their support for tourism.

Tolerance is often viewed negatively as one's endurance or ability to "put up with" a disliked or even abhorred condition (Witenberg, 2019). Mclain (1993; 2009) proposed that tolerance is situated along a continuum anchored by rejection and attraction. This concept has appeared frequently in studies of religion, medicine, anthropology, psychology, and other fields (Shyryn, Assem, & Zhanat, 2013). Researchers have also applied it to specific situations, such as individuals' ambiguity tolerance (Budner, 1962; Mclain, 1993; 2009), uncertainty tolerance (Bos & Hertwig, 2017; Iannello, Mottini, Tirelli, & Riva, 2017), risk tolerance (Grable, 2014; Williams & Balá, 2013), and distress tolerance (Anestis, Lavender, Tull, & Joiner, 2012; Simons & Gaher, 2005).

Tolerance has been incorporated into tourism studies as well. Ap and Crompton (1993) proposed four resident strategies to mitigate tourism impacts, one of which was tolerance. They explained that tolerance reflected residents' ambivalence towards tourism, in that residents enjoyed certain elements but disliked others. Residents thus endured tourism by managing some unpleasant aspects without resentment, often due to acknowledging tourists' contributions to the community's economic vitality. Mansfeld and Ginosar (1994) found that host communities undergo social and cultural change, each of which requires a certain level of community tolerance for tourism development. Wall and Mathieson (2006) came to a similar conclusion. Faulkner et al. (1997) stated that individuals can more readily withstand the personal drawbacks of tourism upon recognizing associated community benefits. Even when residents of developed tourist destinations experience negative consequences from tourism, they still react positively toward tourism development for two main reasons. The first involves altruistic behavior: residents may believe that collective interests are more important than individual interests. The second entails adaptation, specifically that residents adjust to tourism and develop resilience that promotes their tolerance for related effects. Stewart, Kirby, and Steel (2006) believed that tourism-related tolerance is a key aspect of tourism development. In their study, tourists' tolerance was divided into three levels (i.e., cautious tolerance, complex tolerance, and comfortable tolerance) based on residents' willingness to accept tourism impacts. Findings demonstrated that even the respondents who were most cautiously tolerant were prepared to undergo some adjustment and embraced the idea of tourism-related tolerance in general.

The present study proposes that tolerance for tourism may moderate the correlation between residents' personal benefits and perceived negative tourism impacts as well as that between perceived negative tourism impacts and residents' support for tourism. Therefore, the following hypotheses are put forth:

**Hb1. Residents' tolerance for tourism development (TOL) moderates the correlation between their personal benefits from tourism development (BEN) and perceived negative impacts of tourism (NEG), such that the relationship is stronger among residents with low rather than high TOL.**

**Hb2. Residents' tolerance for tourism development (TOL) moderates the correlation between their perceived negative impacts of tourism (NEG) and support for tourism management (SUP), such that the relationship is stronger among residents with low rather than high TOL.**

The preceding hypothetical relationships are illustrated in Fig. 1.

### 3. Methodology

#### 3.1. Instrument design and measurements

The survey instrument was composed of five sections: residents' characteristics (i.e., sociodemographics), personal benefits from tourism development, tolerance for tourism development, perceptions of tourism impacts, and support for tourism. The section on residents' perceptions of tourism impacts solicited respondents' perceptions of positive and negative tourism effects. Construct indicators were adopted from the literature. Personal benefits from tourism development were evaluated based on five items from studies on residents' attitudes toward tourism development (Látková & Vogt, 2012; Nunkoo & So, 2016; Perdue et al., 1990). Perceived tourism impacts were drawn from studies of tourism effects (Dyer et al., 2007; Gursoy & Rutherford, 2004; Yoon, Gursoy, & Chen, 2001). Twelve items covered positive and negative effects, including sociocultural, economic, and environmental effects. Indicators of support for tourism development consisted of six items taken from McGehee and Andereck (2004) and Látková and Vogt (2012). Three items were adapted from Mclain (1993; 2009) to measure tourism tolerance. All items were scored on a 5-point Likert-type scale (1 = strongly disagree, 5 = strongly agree).

#### 3.2. Study site and data collection

Qingyan ancient town in China was selected as the sample area to test our conceptual model. This town represents a quintessential cultural scenic spot with rich historical and cultural connotations. The area served as a major military fortress in southwestern Chinese history. The town is now home to 11 ethnic groups, including Han, Miao, Buyi, Dong, and other minorities. Qingyan ancient town also possesses religious diversity with residents of Buddhist, Taoist, Catholic, and Islamic beliefs (The people's government of Guiyang Huaxi district, 2019). Residents of

this type of destination are considered a key attractiveness factor in drawing visitors; residents' cultural background, customs, hospitality, and behavior each contribute to area tourism development (Deery et al., 2007).

Qingyan ancient town is located in Huaxi District, the southern suburb of Guiyang City, Guizhou province, China. The area includes 17 administrative villages encompassing 106 natural villages and 35,086 residents (Qingyan Town, 2020). The town was founded in the 11th year of the Ming dynasty (1378 AD) as a military fortress and has stood for more than 600 years (Official Website of Qingyan ancient town, 2020). Tourism development has occurred in the town since 2000. In September 2005, China's Ministry of Construction and the State Administration of Cultural Heritage declared Qingyan ancient town part of the second set of famous Chinese historical and cultural towns. The town was named one of the most charming towns in China at the 2013 Summit for International Intangible Cultural Heritage Protection and Inheritance Tourism Planning Project (Qingyan Ancient Town, 2015). In 2016, the town was listed as one of the first small towns with Chinese characteristics by the Ministry of Housing and Urban-Rural Development (MOHURD, 2016). It was labeled a national 5 A tourist attraction soon after on February 25, 2017. Qingyan ancient town embodies military, religious, and minority culture. In light of its inclusivity, the town offers a representative case with which to explore residents' support for tourism development.

Our survey was conducted in three area villages and two communities (West street village, North street village, South street village, East street community, and Mingqing community), constituting core and peripheral tourism areas to mitigate potential spatial biases. The sample size of each area was determined in proportion to the number of households in each village (Table 1). To collect a representative sample from various villages/communities, questionnaires were administered through proportional sampling. In this process, households in each area were selected randomly (Nunkoo & Ramkissoon, 2012). One questionnaire was distributed to each household. The research team, including the authors, an assistant, and a local scenic tour guide, distributed a total of 300 self-administered questionnaires to households using the drop-off-pick-up method from late August to early September 2019 (Steele et al., 2001). This survey method guaranteed a high response rate (Nunkoo & Ramkissoon, 2012). Of the 300 questionnaires distributed, 298 were returned. Twenty-five households did not complete a questionnaire for various reasons (e.g., lack of time or interest). Next, following Hair, Black, Babin, and Anderson (2014), the survey data were examined. To ensure data quality, we adhered to the completeness and accuracy requirements suggested by Jayawardene, Sadiq, and Indulska (2013). Thirty-one questionnaires that contained more than five

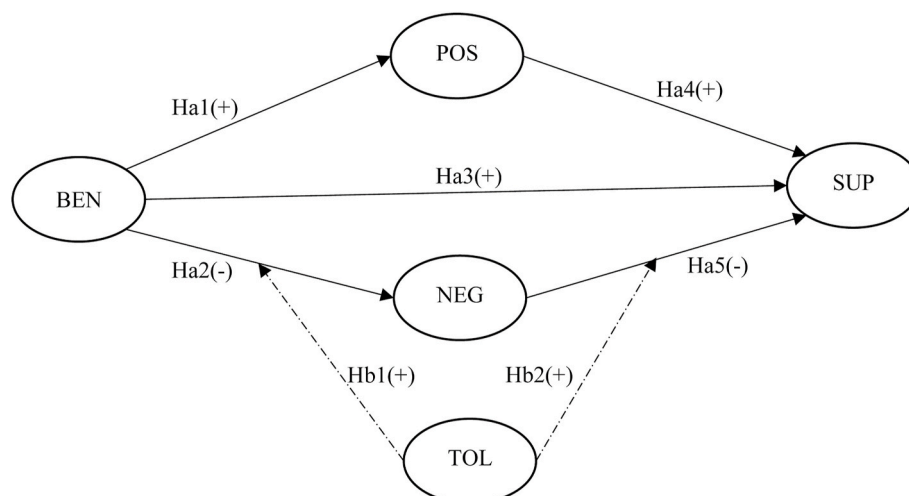


Fig. 1. Conceptual framework.



**Table 1**  
Sample distribution.

Village	Household (N) <sup>a</sup>	Distributed sample	Returned sample	Valid sample	Invalid sample
West street	321	30	30	24	4
North street	585	60	60	48	7
South street	473	50	50	41	5
East street community	625	60	59	46	7
Mingqing community	989	100	99	83	8
Total	2993	300	298	242	31

<sup>a</sup> Data retrieved from [http://www.tcmmap.com.cn/guizhou/huaxiqu\\_qingyanzhen.html](http://www.tcmmap.com.cn/guizhou/huaxiqu_qingyanzhen.html).

unanswered items or that were clearly filled in randomly were discarded (Nunkoo & Gursoy, 2012). Ultimately, 242 surveys were deemed useable (effective response rate: 80.7%) for subsequent statistical analysis.

**3.3. Data analysis**

AMOS 24.0 and SPSS 22.0 were used to analyze the data. First, a descriptive analysis was performed to summarize the sample’s demographic characteristics. Second, confirmatory factor analysis (CFA) was conducted to confirm the reliability and validity of all constructs. Third, structural equation modeling (SEM) was carried out to test the main effects. Finally, moderating effects were tested using regression analysis via Hayes’ (2013) PROCESS macro model tool.

**4. Results**

**4.1. Descriptive data analysis**

Table 2 presents a summary of respondents’ demographic profiles. Women accounted for 55% of respondents. Most respondents were young, between the ages of 19 and 30 (49.6%) or 31–45 (38.4%). Many possessed either a secondary school (30.2%) or high school education (31.0%). Nearly half of the sample had lived in Qingyan ancient town for more than 20 years (48.8%). The largest segment of respondents (38.8%) earned US\$4194–5871 annually (1US\$ = 7.1543 CNY as of September 2019), followed by US\$5872–8386 (26.9%). Most were local residents (66.9%). More than half of respondents engaged in tourism-related work (55.0%). Two measures (i.e., skewness and kurtosis) were examined to determine data normality (Hair, 2014). As indicated in Table 3, the absolute values of skewness did not exceed 3 and those of kurtosis did not exceed 10, satisfying the normality assumption (Kline,

**Table 2**  
Demographic profile of respondents (N = 242).

	n	Percentage		n	Percentage
<b>Gender</b>			<b>Annual income (RMB)</b>		
Male	109	45.0	<18,000	10	4.1
Female	133	55.0	18,012–30,000	29	12.0
<b>Age</b>			30,012–42,000	94	38.8
<18	5	2.1	42,012–60,000	65	26.9
19–30	120	49.6	>60,012	44	18.2
31–45	93	38.4	<b>Duration of residence</b>		
46–60	21	8.7	<1 year	29	12.0
>61	3	1.2	2–5 years	35	14.5
<b>Engagement in tourism</b>			6–10 years	23	9.5
Yes	133	55.0	11–15 years	15	6.2
No	109	45.0	16–20 years	22	9.1
<b>Education</b>			>21 years	118	48.8
Secondary school	73	30.2	<b>Local residents</b>		
High school	75	31.0	Yes	162	66.9
College	57	23.6	No	80	33.1
Post-graduate	37	15.3			

**Table 3**  
Distribution of measurement items.

Item	Mean	Std.	Skewness	Kurtosis
BEN1	4.112	1.010	−1.078	0.789
BEN2	4.132	1.046	−1.188	0.983
BEN3	4.161	0.935	−0.910	0.294
BEN4	4.124	0.912	−0.778	0.161
BEN5	4.202	0.909	−0.914	0.356
POS1	4.550	0.740	−1.908	4.315
POS2	4.587	0.659	−1.595	2.267
POS3	4.455	0.855	−1.627	2.281
POS4	4.401	0.800	−1.537	2.990
POS5	4.471	0.752	−1.317	1.390
POS6	4.376	0.832	−1.279	1.398
POS7	4.467	0.757	−1.187	0.388
POS8	4.562	0.704	−1.659	2.850
NEG1	0.8719	1.088	1.311	1.230
NEG2	0.9421	1.144	1.155	0.596
NEG3	0.6901	0.985	1.627	2.355
NEG4	1.0620	1.156	0.918	0.029
SUP1	4.488	0.724	−1.244	0.769
SUP2	4.529	0.735	−1.648	2.778
SUP3	4.483	0.730	−1.362	1.764
SUP4	4.517	0.774	−1.949	4.627
SUP5	4.678	0.600	−2.280	7.155
SUP6	4.686	0.598	−2.102	4.749
TOL1	2.900	1.381	0.180	−1.157
TOL2	2.813	1.250	0.140	−0.810
TOL3	2.784	1.312	0.250	−0.909

2015).

**4.2. Reliability and validity analysis**

Next, CFA was conducted in AMOS 24.0 to establish the reliability and validity of the measurement model. A model including all five variables (i.e., perceived benefits, positive impacts, negative impacts, support for tourism development and tolerance) demonstrated an acceptable fit:  $\chi^2/df = 2.023, p = 0.000$ ; TLI = 0.890; CFI = 0.902; RMR = 0.056; RMSEA = 0.065. Table 4 presents an overview of the results related to reliability and validity. The average variance extracted (AVE) for each construct was greater than 0.5, indicating that all measures possessed good convergent validity (Hair et al., 2014). Reliability was evaluated based on Cronbach’s alpha ( $\alpha$ ) and composite reliability (CR) values, which were both higher than 0.7 (Nunnally & Bernstein, 1994).

The questionnaire demonstrated discriminant validity because the square root of the AVE of each construct (BEN, POS, NEG, SUP, and TOL) exceeded its highest association with the remaining constructs (Fornell & Larcker, 1981). The absolute values of the heterotrait-monotrait (HTMT) ratio were lower than the critical threshold of 0.85 (Kline, 2015), further substantiating the instrument’s discriminant validity (Table 5).

**Table 4**  
Assessment of measurement model (N = 242).

Item	Factor loading	Scale	Cronbach's $\alpha$	CR	AVE
BEN1	0.804***	Benefits from tourism development	0.926	0.929	0.724
BEN2	0.806***				
BEN3	0.900***				
BEN4	0.886***				
BEN5	0.853***				
POS1	0.742***	Positive impacts of tourism	0.897	0.900	0.529
POS2	0.747***				
POS3	0.767***				
POS4	0.709***				
POS5	0.656***				
POS6	0.660***				
POS7	0.816***				
POS8	0.709***				
NEG1	0.731***	Negative impacts of tourism	0.812	0.818	0.531
NEG2	0.816***				
NEG3	0.723***				
NEG4	0.632***				
SUP1	0.806***	Support for tourism development	0.878	0.881	0.555
SUP2	0.869***				
SUP3	0.752***				
SUP4	0.642***				
SUP5	0.689***				
SUP6	0.687***				
TOL1	0.651***	Tolerance for tourism	0.857	0.869	0.694
TOL2	0.873***				
TOL3	0.947***				

Note: \*\*\* $p < 0.001$ .

**Table 5**  
Discriminant validity.

	BEN	POS	NEG	SUP	TOL
BEN	<b>0.851</b>	0.546	-0.296	0.576	-0.100
POS	0.544	<b>0.727</b>	-0.583	0.713	-0.011
NEG	-0.266	-0.560	<b>0.729</b>	-0.439	-0.022
SUP	0.568	0.723	-0.405	<b>0.745</b>	-0.097
TOL	-0.123	-0.014	-0.053	-0.090	<b>0.833</b>

Note: Fornell–Larcker criterion appears below the main diagonal; HTMT ratio appears above the main diagonal; main diagonal in bold presents the square root of the AVE.

### 4.3. Hypothesis testing

#### 4.3.1. Main effects

SEM was performed in AMOS 24.0 to estimate the main effects model whose parameters were used to test Ha1–Ha5. The main effects hypotheses were also tested via SEM. The SEM results indicated an acceptable overall fit:  $\chi^2/df = 2.476$ ,  $p = 0.000$ ; TLI = 0.894; CFI = 0.907; RMR = 0.041; RMSEA = 0.078. As displayed in Table 6, BEN had a significant effect on POS ( $\beta = 0.545$ ,  $t = 7.496$ ,  $p < 0.001$ ) and NEG ( $\beta = -0.266$ ,  $t = -3.603$ ,  $p < 0.001$ ); Ha1 and Ha2 were therefore supported. SUP was significantly and positively influenced by BEN ( $\beta = 0.251$ ,  $t = 3.818$ ,  $p < 0.001$ ) and POS ( $\beta = 0.597$ ,  $t = 6.549$ ,  $p < 0.001$ ), lending support to Ha3 and Ha4. However, the path coefficient from NEG to SUP was not significant ( $\beta = 0.004$ ,  $t = 0.062$ ,  $p > 0.05$ ); Ha5 was

**Table 6**  
Results of structural path analysis and hypothesis tests.

Hypothesis	Predicted relationships	Standardized path loadings	Standard error	t-value	Hypothesis test
Ha1	BEN → POS	0.545 <sup>a</sup>	0.050	7.496	Supported
Ha2	BEN → NEG	-0.266 <sup>a</sup>	0.073	-3.603	Supported
Ha3	BEN → SUP	0.251 <sup>a</sup>	0.047	3.818	Supported
Ha4	POS → SUP	0.597 <sup>a</sup>	0.096	6.549	Supported
Ha5	NEG → SUP	0.004 <sup>NS</sup>	0.051	0.062	Rejected

Note: <sup>a</sup> $p < 0.001$ ; <sup>NS</sup> $p > 0.05$ .

thus not supported.

#### 4.3.2. Moderating effects

To test Hb1 and Hb2, moderated regression analysis was performed to examine the moderating effect of TOL. Following Hayes' (2013) suggestion, a moderated mediation analysis (Model 58 in the SPSS PROCESS macro) with 5,000 bootstrap samples was conducted to test the proposed moderating effect. Before performing this analysis, the independent variables and moderator were mean-centered to avoid potential multi-collinearity (Aiken & West, 1991).

As depicted in Table 7, the interaction between TOL and BEN on NEG was not significant (point estimate = 0.070; 95% confidence interval: [-0.039, 0.179];  $p = 0.206$ ), failing to support Hb1. The interaction between TOL and NEG was positively correlated with SUP (point estimate = 0.101; 95% confidence interval: [0.043, 0.159];  $p = 0.0007 < 0.001$ ), implying that TOL significantly mitigated the negative effect of NEG on SUP. In particular, the negative impact of NEG on SUP declined as TOL increased; Hb2 was accordingly substantiated.

The moderating effect is illustrated in Fig. 2. In accordance with Aiken and West's (1991) recommendation, the moderator was divided into plus/minus one standard deviation from the mean. Fig. 2 indicates that although NEG decreased SUP, the negative effect of NEG was more pronounced among residents with low tourism tolerance; that is, NEG was more negatively correlated with SUP when TOL was lower ( $\beta = -0.317$ ,  $p < 0.001$ ) than when it was higher ( $\beta = -0.058$ ,  $p = 0.368$ ).

This study revisited the classic topic of residents' attitudes toward tourism development. Specifically, our work explored related antecedents and the internal mechanism behind residents' support for tourism development by drawing on survey data in an ancient town. A conceptual model was then developed and tested based on a study by Perdue et al. (1990). The proposed model could explain residents' support holistically by integrating individual and collective rationality in a tourist destination. Given this perspective, a new construct (i.e., residents' tolerance for tourism development) was incorporated into our model. The preceding analyses generated several findings worthy of discussion.

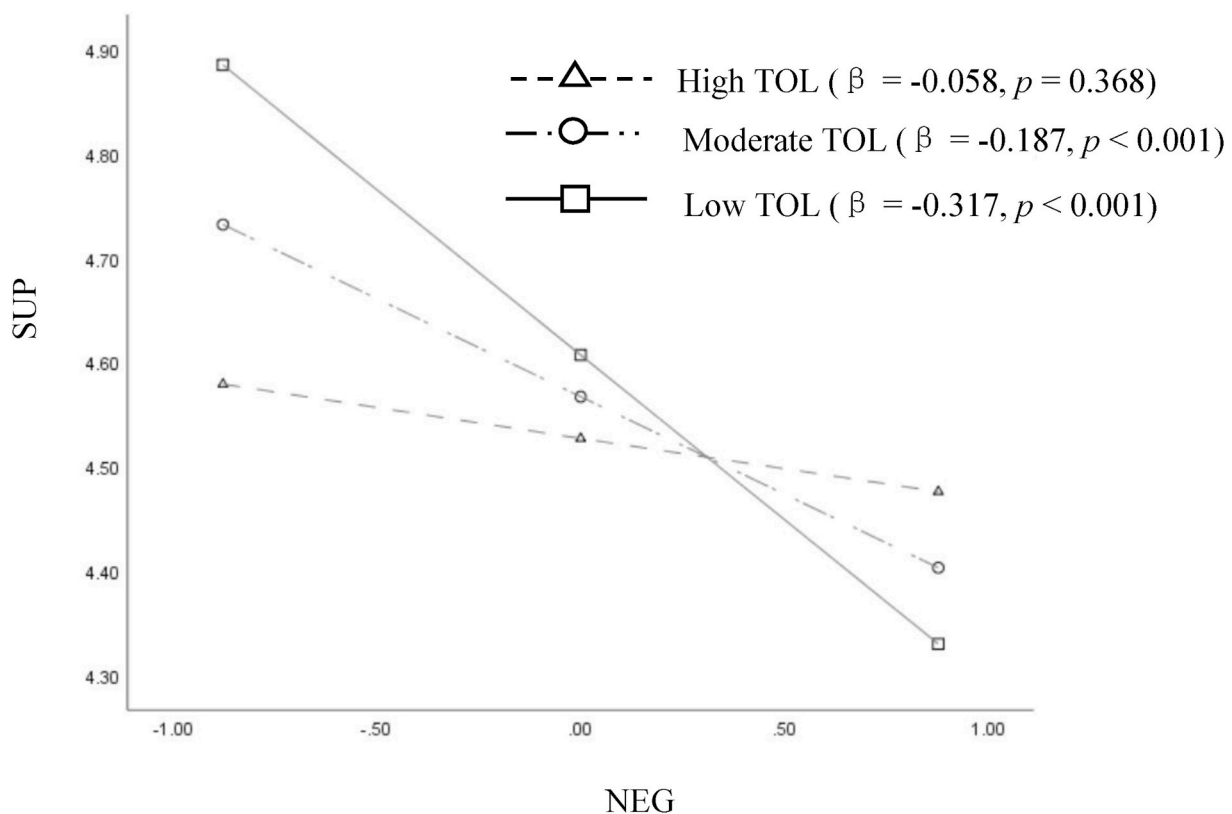
**Individual rationality.** Previous studies on residents' support for tourism development mostly focused on SET (Gursoy et al., 2019; Hadinejad et al., 2019), which emphasizes residents' individual rationality as characterized by maximizing self-interest after assessing benefits and costs. Residents are inclined to participate in exchanges as long as they experience greater benefits than costs (Nunkoo & So, 2016). In the current study, the main effects of the "personal benefit–tourism impacts–attitude" pathway were tested via SEM (Table 6).

First, our results demonstrated that personal benefits constitute a key determinant of positive tourism impacts, negative tourism impacts, and support for tourism (Ha1, Ha2, and Ha3 were each supported). These patterns corroborate a large body of work in this field (e.g., Kang & Lee, 2018; Látková & Vogt, 2012; Nunkoo & Ramkissoon, 2010). These findings further indicate that personal benefits influence residents' perceptions of tourism impacts and directly affect their support for tourism development. The assumption of individual rationality based on SET therefore plays a pivotal role in shaping residents' perceptions of tourism impacts and their support for tourism. Based on residents' individual rationality, as long as they can receive more benefits from tourism development, they should react positively to it (Martín et al.,

**Table 7**  
Regression results for moderated mediation model.

Antecedents	Consequences									
	M(NEG)					Y(SUP)				
	Point estimate	Standard error	<i>p</i>	BC 95% confidence interval		Point estimate	Standard error	<i>p</i>	BC 95% confidence interval	
			<i>Lower</i>	<i>Upper</i>				<i>Lower</i>	<i>Upper</i>	
Constant	2.851	0.675	<0.001	1.522	4.180	3.763	0.190	<0.001	3.389	4.136
BEN	-0.452	0.157	0.004	-0.761	-0.143	0.291	0.035	<0.001	0.223	0.360
TOL	-0.318	0.233	0.174	-0.777	0.142	-0.106	0.035	0.003	-0.176	-0.036
NEG						-0.406	0.078	<0.001	-0.561	-0.252
TOL × BEN	0.070	0.055	0.206	-0.039	0.179					
TOL × NEG						0.101	0.029	0.0007	0.043	0.159
R <sup>2</sup>	0.075					0.372				
F	6.400					35.159				
<i>p</i>	<0.001					<0.001				

Note: BC = bias-corrected bootstrap.



**Fig. 2.** Negative impacts of tourism (NEG) × Residents’ tolerance for tourism (TOL) on Support for tourism development (SUP).

2020; Rasoolimanesh et al., 2015). Therefore, these trends support characteristics of individual rationality and contribute to a consensus among tourism scholars. Our findings hence verify existing explanations of SET. Notably, although our research confirmed the negative relationship between personal benefits and negative tourism impacts, other studies have revealed no significant correlation between them (e.g., Vargas-Sánchez et al., 2011; Vargas-Sánchez et al., 2015). Mixed findings related to SET should therefore be explored further.

Second, in the present investigation, positive tourism impacts exerted a significant and positive effect on residents’ support for tourism, while negative tourism impacts were not associated with support for tourism. Such direct effects of residents’ perceived tourism impacts have been partially verified. These findings differ from SET-based assertions that residents’ support is significantly influenced by their perceptions of (positive or negative) tourism impacts (Chi et al., 2018; Kang & Lee, 2018). However, our findings align with those of others based on SET.

For example, Gursoy et al. (2002), Vargas-Sánchez et al. (2015), and Ribeiro et al. (2017) confirmed that positive tourism impacts for residents in local destinations serve as a main antecedent in shaping residents’ support for tourism development. They also found no significant correlation between negative tourism impacts and support for tourism. Residents’ perceived negative impacts thus appear not to affect their support for tourism development. Therefore, these ambiguous relationships (i.e., between negative tourism impacts and support for tourism) imply that SET, which emphasizes individual interests rather than collective interests, is not comprehensive (Faulkner et al., 1997).

**Collective rationality.** Many scholars have criticized SET for its inability to fully elucidate residents’ responses to tourism due to the theoretical emphasis on individual rationality, which concerns residents’ self-interest and lack of thinking at the group level (Chang, 2018; Rasoolimanesh et al., 2015). Given the aforementioned mixed findings, we incorporated a new construct (i.e., residents’ tolerance for tourism

development) into our structural model based on altruism or concern for others' welfare (i.e., collective rationality) (Bar-Tal, 1985). The moderating role of tourism tolerance (Hb1 and Hb2) was then tested, revealing that tolerance for tourism did not significantly moderate the negative effects of personal benefits on negative tourism impacts. Hb1 was therefore rejected: residents' tolerance for tourism did not influence the association between personal benefits from tourism development and perceived negative tourism consequences. Prior studies showed that an inconsistent relationship between personal benefits and negative tourism impacts may be attributable to the degree of tourism development or residents' education (Ko & Stewart, 2002; Vargas-Sánchez et al., 2015). By contrast, in this study, tolerance for tourism was found to be a significant moderator that alleviated the adverse effects of negative tourism impacts on residents' support for tourism, supporting Hb2: residents' tolerance for tourism indeed had a moderating effect on the correlation between negative tourism impacts and support for tourism. This result enriches work suggesting that tourism tolerance may serve as a useful moderator between negative tourism impacts and support for tourism. Presumably, if residents are highly tolerant of tourism development, they will attempt to handle the inherent uncertainty of such development based on altruistic considerations. They may also be willing to endure inconvenience for the sake of collective interests and for long-term destination development.

In sum, these findings shed light on the controversial relationship between residents' perceived negative tourism impacts and support for tourism along with the internal mechanism underlying such support. Residents' support for tourism in a tourist destination depends on not only individual rationality but also collective rationality. This study also presents a perspective that may guide subsequent research.

## 5. Implications and limitations

### 5.1. Theoretical implications

Resident support is crucial to the sustainability of tourism development in any destination. SET prevails as a theoretical framework in research on resident support for tourism, with numerous scholars praising the theory's explanatory power. However, some scholars have questioned SET's capacity to explain residents' attitudes based on its limited scope (Clifton & Benson, 2006; Hadinejad et al., 2019). They pointed out that SET is valid in clarifying the associations between personal benefits, perceived positive tourism impacts, and support for tourism. Comparatively, the relationships among personal benefits, perceived negative tourism impacts, and support for tourism remain largely inconsistent. Although many scholars have argued that SET cannot fully explain residents' support for tourism, few studies have focused on the controversial relationships between personal benefits and negative impacts as well as between perceived negative impacts and resident support. Therefore, this study retested the original model based on residents' support for tourism by focusing on the mixed relationship between (a) residents' perceived personal benefits from tourism and perceived negative tourism impacts and (b) perceived negative tourism impacts and residents' support for tourism.

The "rational man" assumption is a tenet of SET, with scholars explaining that this notion is dualistic in encompassing personal and collective rationality (Bankston, 2003; Olson, 1971). However, studies on residents' support for tourism have primarily used SET to focus on individual rationality to the neglect of collective interests (Chang, 2018; Clifton & Benson, 2006). SET's emphasis on individual rationality implies that residents' attitudes or behavior are contingent on presumed benefits and costs. Yet researchers have suggested that residents' altruism leads them to consider individual and collective interests when making decisions. Thereby, this study proposed an integrative model integrating individual and collective rationality to contextualize residents' support for tourism.

Lastly, another key contribution of this study lies in its introduction

of a new construct of "tolerance for tourism development," which was incorporated into the proposed conceptual model based on Perdue et al. (1990). Although other studies have referred to this construct, few have explored it in depth. Residents' tolerance for tourism was included as a contextual variable in the current study's conceptual model to test its moderating effects. Residents' tolerance for tourism development has been shown to significantly moderate the relationship between perceived negative impacts and tourism support; it implies that higher tolerance reduces the effect of perceived negative impacts on residents' support for tourism development. The negative association between tourism's negative effects and residents' supportive behavior is conditional upon their consideration of collective rationality. This result explains why residents may support tourism development despite perceived negative impacts. This finding also addresses the controversy surrounding resident support and confirms an instructional relationship between individual rationality and collective rationality in determining residents' support. As such, this study expands the relevant body of knowledge by unraveling the sophisticated mechanism driving residents' support formation.

### 5.2. Managerial implications

The results of this study can help tourism managers and tourist destination officials realize that resident support is essential to destination development. By revisiting the topic of resident support for tourism development, this empirical research offers a novel perspective on planning tourism projects and tourism-related policies. The internal mechanism driving residents' tourism support has been clarified to help tourism destination developers and managers strengthen such support. Put simply, residents' tourism support is pivotal to sustainable destination development. Authorities should consider residents' individual and collective rationality throughout tourism development when formulating or implementing destination-related policies and plans to ensure sustainable development.

First of all, with respect to individual rationality, residents' personal benefits and their perceptions of positive tourism impacts were found to be key antecedents of their support. This finding should encourage local tourism managers and officials to devise effective measures to enhance residents' support for tourism. For instance, residents should be provided as many job opportunities as possible so they may participate in tourism development and directly benefit from tourism. More intensive tourism-related training for locals could compensate for their generally low-level education and strengthen their perceptions of tourism. Additionally, local tourism managers and officials should consider implementing a tourism revenue re-distribution scheme to compensate local residents. With these measures, residents' personal benefits and perceived tourism impacts could be strengthened to enhance support for tourism development.

Second, this study's findings are generally encouraging: residents may continue to support tourism development for the sake of collective interests even when facing negative consequences. This study concluded that residents will tolerate certain negative impacts and will continue to support tourism development from the perspective of collective rationality. Therefore, local tourism managers and officials should publicize the benefits of tourism development at the community level and collective level; doing so should raise residents' awareness that tourism development is conducive to both destination development and long-term development.

Furthermore, our study emphasizes the moderating role of tourism tolerance in the relationship between perceived negative tourism impacts and residents' support for tourism. Residents with low tolerance tend to pay more attention to negative tourism impacts and express less support for tourism development. Conversely, residents who are more tolerant are inclined to withstand negative tourism impacts to a certain extent. Destination developers and managers should pay more attention to low-tolerance residents by publicizing local tourism development to



show residents its long-term value for destination development. Meanwhile, authorities can acquire stronger support from locals by improving residents' tolerance for tourism, relieving negative emotions, and alleviating unnecessary conflict during tourism development.

Finally, although tolerance can allay residents' negative perceptions of tourism, tolerance has a ceiling; that is, residents will support tourism development to a certain point by accepting inconvenience or the negative impacts of tourism due to collective rationality or altruism. Once this threshold is exceeded, residents' support will decline as perceived negative tourism impacts increase, in turn hindering tourism development. Therefore, residents' perceived negative tourism impacts should not be ignored during local tourism development; developers and officials should remain cognizant of potential consequences because residents' tolerance for tourism is finite. As such, destination developers and managers should seek to minimize the adverse effects of tourism development as much as possible to promote sustainable development.

### 5.3. Limitations

The limitations of this study mainly involve the following three aspects. First, residents' perceptions of tourism impacts only covered two dimensions, positive and negative. While studies have shown that residents' perceptions of tourism effects include concerns about their location's economy, social culture, and environment, these factors were not considered here. A more comprehensive classification should be adopted in future work to delineate specific antecedents of residents' support for tourism destination development. Second, only uncertainty around tourism development was considered when assessing residents' tolerance for tourism. McClain (1993, 2009) contended that tourism tolerance includes features such as uncertainty, complexity, and novelty. The measurement of residents' tourism tolerance should thus be expanded in subsequent studies. Third, the number of useable questionnaires was limited because 25 households did not participate and 31 questionnaires were excluded from data analysis to ensure data quality. These 31 invalid samples, though generated in a nonrandom manner, might also cause potential bias to the parameter estimation. This relatively low usability rate are also likely to minimize the generalizability of our findings. Finally, we referred to a single representative tourism destination; follow-up studies could use a more diverse sample to further test the external validity of our research model.

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