Assessing the Mediating Role of Residents' Perceptions toward Tourism Development

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Abstract

Framed by social exchange theory and Weber's theory of substantive and formal rationality, this study investigates the mediating role of residents' perceptions of tourism impacts. It examines whether community attachment, environmental and cultural attitudes, economic gain, and community involvement directly impact upon residents' support for tourism development, or if their influences are mediated by perceptions of tourism impacts. Data were collected from residents within two historical cities in Iran: Kashan and Tabriz. The findings reveal that residents' perceptions of tourism impacts play a significant mediating role in shaping the relationships between community attachment, environmental attitudes, and economic gain on support for tourism development. However, the results do not support the indirect effects of cultural attitudes and involvement on support for tourism development. This study thus extends extant knowledge by highlighting the mediating role played by residents' perceptions of tourism impacts, comparing direct and indirect effects on support for tourism development.

Keywords: Residents' perceptions; support for tourism development; mediation assessment; Social Exchange Theory (SET); Weber's theory of substantive and formal rationality (WTSFR); Iran

Introduction

Extant research suggests that residents typically support tourism development in their local community when they perceive its potential impacts in a positive light (Látková and Vogt 2012; Nicholas et al. 2009; Nunkoo and Ramkissoon 2012; Rasoolimanesh and Jaafar 2017; Sharpley 2014). To this end, tourism can positively impact communities by improving employment opportunities, living standards, and infrastructure; increasing the availability of recreation and entertainment facilities; and promoting and preserving local culture, all buttressed by the economic bounty derived from increased visitor numbers (Andereck et al. 2005; Deery et al. 2012; Ko and Stewart 2002; McGehee et al. 2002).

However, the potential negative impacts of inbound tourism cannot be overlooked, with emphasis placed on rising living costs and property prices; overcrowding and traffic congestion; and increased crime (Deery et al. 2012; Ko and Stewart 2002; Látková and Vogt 2012). Recognizing this duality, recent research has investigated the influence of: community attachment (Gursoy et al., 2002; Látková and Vogt 2012), community involvement (Nicholas et al. 2009; Rasoolimanesh et al. 2017d), environmental attitudes (Gursoy et al. 2002; Nicholas et al., 2009), cultural attitudes (Rasoolimanesh et al. 2017b), and economic gain (Ko and Stewart 2002; Rasoolimanesh et al. 2015) on residents' perceptions of the impact of (and their subsequent support for) tourism development.

Yet, few extant studies examine the processes and mechanisms surrounding the effects of these influencing factors on residents' support for tourism development. Thus, the extent to which residents' perceptions of tourism impacts mediate a) the relationships between established influencing factors, and b) their support for tourism development remains underexplored. Further, while investigating whether residents' perceptions mediate the relationships between established influencing factors and residents' support for tourism development can highlight the mechanism of these effects, previous studies typically examine

residents' support for tourism development as a final outcome. Thus, from a theoretical perspective, investigating this mechanism can extend current understanding by highlighting whether the inclusion of residents' perceptions has been necessary in previous studies, shaping the direction of future research in the process. More practically, investigating this mechanism can assist local authorities and heritage managers to determine their focus when setting priorities and strategic directions aimed at stimulating residents' support for tourism development within their own communities. This study therefore aims to contribute to both theory and industry by demonstrating whether these influencing factors, examined extensively across prior literature, affect residents' support for tourism development directly or indirectly by influencing their perceptions.

To this end, several theories have been used to investigate whether (and how) influencing factors shape residents' perceptions of, and support for, tourism development. However, while stakeholder theory (Nicholas et al. 2009; Rasoolimanesh and Jaafar 2017) and Weber's theory of formal and substantive rationality (Boley et al. 2014; Md Noor et al. 2019) underpin some studies into residents' perceptions, social exchange theory (SET) dominates discourse (Gursoy et al. 2002; Jurowski et al. 1997; Ko and Stewart 2002; Látková and Vogt 2012; Nunkoo et al. 2013; Rasoolimanesh et al. 2015; Sharpley 2014). According to SET, residents are more willing to support tourism development when positive perceptions of tourism impacts outweigh the negative (Andereck et al. 2005; Jurowski et al. 1997; Wang and Pfister 2008). However, SET is limited as it can only be used to understand the effects of positive and negative perceptions on support for tourism development.

Nonetheless, previous studies have applied SET to justify the effects of influencing factors on residents' perceptions toward tourism development (Rasoolimanesh et al. 2015; Sharpley, 2014). However, recent discourse has criticized SET's ability to explain the factors influencing residents' perceptions (Andereck et al. 2005; Boley et al. 2014; Sharpley 2014).

In response, some studies propose that Weber's theory of substantive and formal rationality (WTSFR) (Weber 1978) can serve as an alternative theory, or indeed can be combined with SET, in order to better frame investigations into the factors influencing residents' perceptions of, and support for, tourism development (Andereck et al. 2005; Boley et al. 2014; Rasoolimanesh et al. 2017a).

WTSFR explains activities and perceptions based on two types of rationality: substantive and formal (Boley et al. 2014). Formal rationality focuses on profit-maximisation and economic benefit, while substantive rationality refers to beliefs, values, ideological motivations, and morals (McGehee 2007). In this study, both theories were applied, with SET supporting the effect of residents' perceptions on support for tourism development, while WTSFR supports the effects of influencing factors on residents' perceptions and support for tourism development.

Thus, by combining SET and WTSFR, this study aims to examine and understand the intervening and mediating role of residents' perceptions between influencing factors and support for tourism development. In doing so, data were collected from two historical cities in Iran: Kashan and Tabriz, with multi-group analysis performed to cross-validate the results of the assessment of the mediating role of residents' perceptions toward tourism development. Both cities are rich in tangible and intangible heritage and cultural assets. As a result, both attract large numbers of tourists while also remaining functioning cities with significant residential populations (Rasoolimanesh et al. 2019b). Further, few studies focus on the perceptions of residents toward tourism development in developing contexts, such as the Iranian heritage sector, despite the potentially crucial role that residents' perceptions can play in stimulating effective and sustainable destination management. Therefore, in addition to its theoretical contributions, this study may hold significant practical value for those managing historical destinations in Iran.

Literature Review

Theoretical Framework

This study is underpinned by two complementary theories: SET (Emerson 1976) and WTSFR (Weber 1978). SET emerged from sociology literature and has been adopted to understand and explore the meanings and machinations behind interactions between distinct groups (Boley et al. 2014). Given its emphasis on sociality and communication, tourism scholars have embraced SET, using it to frame the two-way interaction between host and tourist (Jurowski et al. 1997; Thompson et al. 2018). Further, SET has been used to capture how residents perceive local tourism development (Haobin et al. 2014; Nunkoo et al. 2013; Perdue et al. 1990; Rasoolimanesh et al. 2015). Under such circumstances, residents are inclined to interact with tourists when they perceive that the benefits of tourism outweigh its costs (Curran et al. 2018). As such, if the cost of developing the local tourism industry is surpassed by its perceived benefit to the community, residents may be more likely to support tourism development in their local area (Jurowski et al. 1997).

However, recent studies also highlight drawbacks with SET, criticizing its ability to justify the effects of influencing factors on residents' perceptions, indicating that SET alone cannot be used to fully explain the combination of antecedents shaping residents' perceptions (Rasoolimanesh et al. 2015; Ward and Berno 2011; Woosnam 2011). To this end, Woosnam (2011) questions the utility of SET, criticizing the emphasis it places on explaining relationships as the equivalent of financial transactions. Further, Ward and Berno (2011), contend that SET overlooks the importance of the point-of-contact between resident and tourist, particularly when tourists are perceived as significantly different from residents in a demographic sense, and how this can subsequently shape residents' behaviors and attitudes.

Additionally, Rasoolimanesh et al. (2015) suggest that SET's focus on the perceived individual benefits of any 'exchange' overlooks the importance of collective gains manifest as

a result of a thriving local tourism industry, with this perceived shared benefit considered crucial in order to gain an understanding of residents' perceptions of tourism development at a community level. As such, some recent studies have applied alternative theories - in combination with SET - in order to better explain the reasons underpinning residents' perceptions, with others replacing it entirely (Boley et al. 2014; Ward and Berno, 2011). Thus, cognizant of the recent focus on the limitations of SET, this study also applied WTSFR in order to justify and conceptualize the direct and indirect effects of influencing factors on residents' perceptions and support for tourism development.

WTSFR suggests that 'matter-of-fact calculations' allow individuals to accomplish their goals efficiently (McGehee 2007; Weber 1978). This is underpinned by the belief that rationality is manifest in two ways: (i) formally and/or (ii) substantively (Kalberg 1980). Formal rationality is linear, with economic decisions influenced via direct interactions between 'means' and 'ends', whereas substantive rationality is value-laden and can influence human behaviour (Boley et al. 2014; Zuo et al. 2017). By recognising the duality manifest through rationality, "Weber provides a format that allows for the formal or market and economic-based elements as well as the less quantifiable substantive or value- and belief-oriented elements of decision making/risk assessment" (McGehee and Andereck 2004, 139).

As such, numerous studies have adopted WTSFR in investigating, understanding, and evaluating how a range of factors influence residents' perceptions of, and support for, increased tourism development within their community (Boley et al. 2014; McGehee and Andereck 2004). To this end, Perdue et al. (1990) suggest that four key considerations influence residents' attitudes towards tourism: their characteristics; the potential benefit they may receive from increased tourism; whether they perceive the impact of tourism to be negative or positive; and whether they support tourism development more generally. This four-stage conceptual model supports WTSFR in recognising the complex nature of residents'

perceptions and attitudes, and how this can influence support for tourism development in their local community. In doing so, it addresses the inherent limitations of SET (Andereck et al. 2005), and is suitable for investigating the role played by a myriad of factors in influencing residents' perceptions towards tourism development.

Residents' perceptions and support for tourism development

The potential impact of tourism development on local communities is long established, with visitors expected to interact with residents and contribute to local businesses, directly influencing the design and function of destinations and heritage sites and the behaviour of the population therein (Almeida-Garcia et al. 2016; Andereck et al. 2005; Kim et al. 2013; Rasoolimanesh, et al. 2017b; Vareiro et al. 2013). As such, tourism can influence community values and residents' behaviors, lifestyles, and quality-of-life (Huang and Hsu 2005; Jaafar et al. 2017). At a micro level, a burgeoning and developing tourism industry stimulates economic, sociocultural, and environmental change in local communities (Ko and Stewart 2002; Rasoolimanesh et al. 2015). If developed carefully, a focus on tourism can allow local communities to benefit from increased wages, higher living standards, and a wider range of employment opportunities (Rasoolimanesh et al. 2017a). However, tourism development can also cause communities to suffer from higher living costs, higher prices for goods and services, higher property prices and taxes, and fewer career prospects due to the perceived unskilled nature of many tourism and hospitality occupations (Látková and Vogt 2012; MacKenzie and Gannon 2019).

Yet, the impact tourism development can have on local communities is not solely economic. Tourism development is often underpinned by an improvement in the volume and quality of leisure and entertainment amenities available to local residents, and from a sociocultural perspective can preserve traditional arts and culture by showcasing cultural

identity to a wider, often unfamiliar, audience (Jaafar et al. 2017; Rasoolimanesh et al. 2017b). Nonetheless, the sociocultural impact of tourism development is again not always wholly positive, as increased visitor numbers can lead to overcrowding, traffic, crime, and litter, all while commoditizing local culture in the process (Akama and Kieti 2007; Jaafar et al. 2017). Further, tourism development can have an adverse environmental impact, damaging natural landmarks and local ecosystems while also increasing air and water pollution (MacKenzie and Gannon 2019). As such, consistent with SET, the interconnected benefits and drawbacks of tourism development leave local communities with tough decisions when debating whether to cultivate a tourism industry (Rasoolimanesh et al. 2015; Sharpley and Telfer 2008). Under such circumstances, residents may be more likely to support tourism development if they perceive it will stimulate the aforementioned positive community benefits, with those who perceive tourism development as likely to have a negative impact on their community typically more likely to oppose it (Nunkoo and Ramkissoon 2011). Thus:

H1: *Resident perceptions toward tourism development have a positive effect on their support for tourism development.*

Factors influencing residents' perceptions and support for tourism development

Given the complexity outlined above, it is perhaps of no surprise that recent research has identified that residents' support for tourism development is influenced by a variety of distinct yet interconnected factors (Látková and Vogt 2012; Rasoolimanesh et al. 2015). To this end, extant research recognises the crucial role that residents' sense of community attachment and community involvement, their environmental and cultural attitudes, and their desire for economic gain brought about by increased visitor numbers play, with each often combining to influence their support for tourism development (Besculides et al. 2012; Nicholas et al. 2009; Látková and Vogt 2012; Olya and Gavilyan 2017). Additionally, consistent with WTSFR's notion of substantive rationality, residents' sense of community attachment, community

involvement, and their environmental and cultural attitudes may prove key determinants of their support for tourism development, as values and beliefs typically influence individuals' perceptions. Further, the possible economic benefit of tourism development means that the formal rationality inherent to WTSFR may also be supported.

To this end, Moghavvemi et al. (2017, 244) suggest that residents' sense of community attachment "has the capability to predict attitudes about tourism development due to the fact that residents who are strongly committed to their community are more involved and exposed to tourism impacts". While providing a platform from which to develop tourism offerings, residents' sense of community attachment can also be manifest as a desire to maintain the status quo, shield heritage assets from damage and degradation, and ensure that increased tourism numbers do not dilute the sense of community that residents' cherish (Cisneros-Martínez et al. 2018; MacKenzie and Gannon 2019).

Yet, residents' level of community attachment is also underpinned by social interaction and a sense of communal togetherness as "without social interaction, people living in a given area can only be described as a group of individuals living separate lives, with little sense of community or sense of pride or place attachment" (Dempsey et al. 2011, 294), resulting in a potentially powerful *collective* antecedent to support for tourism development. However, community attachment is characterised by a symbiosis between resident and community, where pride - often manifest as a desire to showcase the positive aspects of a destination to visitors - prevails (Rasoolimanesh et al. 2017b). As such, community attachment may stimulate residents' perceptions toward, and support for, the development of a tourism industry and its associated service offerings within their local community if it is designed and implemented in a sympathetic and appropriate manner (McCool and Martin 1994). Therefore:

H2: *Community attachment has a positive direct effect on support for tourism development.*

H3: *Community attachment has a positive direct effect on residents' perceptions towards tourism development.*

Residents' core beliefs and attitudes may thus influence their support for tourism development (Moghavvemi et al. 2017). Research recognises the importance of residents' values, with emphasis on how these influence their perceptions more generally (Woosnam et al. 2018; Zuo et al. 2017). However, concerning tourism development, residents' *environmental* and *cultural* attitudes hold perhaps the greatest sway (Woosnam et al. 2018). In this context, residents may feel a sense of ownership with regards to their locale and cultural assets contained therein, with associated concerns surrounding the environmental impact of increased tourist numbers and the subsequent dilution of local culture (Cisneros-Martínez et al. 2018). This brings to mind notions of substantive rationality, which suggests that residents hoping to safeguard longstanding traditions, beliefs, and values may not necessarily perceive the economic boon of increased tourism as a priority.

Nonetheless, cultural heritage tourism is long associated with conservation and sustainability (Taheri et al. 2018), and residents with deeper cultural and environmental attitudes may support tourism development on account of its potential to promote and sustain local traditions and customs (Stylidis et al. 2014; Woosnam et al. 2018). Further, such residents may support tourism development by recognising that it does not necessarily signal environmental Armageddon, with the sector increasingly cognizant of its responsibility to safeguard heritage assets while undertaking tourism development initiatives (He et al. 2018). As such, residents possessing strong cultural and environmental attitudes may hold more positive perceptions of tourism's impacts, supporting tourism development on the proviso that it plays a key role in ensuring site sustainability and preservation. Thus:

H4: *Environmental attitude has a positive direct effect on support for tourism development.*

H5: *Environmental attitude has a positive direct effect on residents' perceptions towards tourism development.*

H6: *Cultural attitude has a positive direct effect on residents' support for tourism development.*

H7: *Cultural attitude has a positive direct effect on residents' perceptions towards tourism development.*

Yet, support for tourism development is not only underpinned by psychological or attitudinal considerations. Its potential positive economic impact, at both an individual and community level, also serves to motivate residents' support for tourism development (Boley et al. 2014; Zuo et al. 2017). As such, the efficacy of tourism development cognizant of residents' cultural and environmental attitudes is contentious if there is no commensurate financial windfall brought about by increased visitor numbers (Higham 2007). Indeed, acknowledging the economic potential of tourism best demonstrates recognition of the 'means-end' interaction inherent to formal rationality (Boley et al. 2014), and may serve as the most obvious and influential factor impacting upon residents' support for tourism development (Kristjánsdóttir et al. 2018). To this end, residents who anticipate greater economic gain from increased tourism may be more positive about tourism development and more inclined to support initiatives aimed at increasing inbound tourism (Jurowski et al. 1997). However, while the prospect of economic gain brought about by tourism can foster resident backing, the interplay between the factors influencing support for tourism development again becomes apparent as long term sustainable economic development may only materialise if the needs of both residents *and* visitors are met (Curran et al. 2018; MacKenzie and Gannon 2019). As such:

H8: *Economic gain has a positive direct effect on support for tourism development*.

H9: *Economic gain has a positive direct effect on residents' perceptions towards tourism development.*

Finally, feelings of community involvement may stimulate positive perceptions toward, and support for, tourism development as it can empower residents and encourage them to align themselves more closely with their local area (Andereck and Nyaupane 2011; Látková and Vogt 2012). Here, emphasis is placed on the extent to which community involvement stimulates contribution and perceived control over the tourism development process (Zuo et al. 2017). As such, a perceived sense of ownership, autonomy, and influence (via community involvement) may stimulate residents' support for tourism development initiatives (Nunkoo and Ramikissoon 2011). Further, community involvement raises residents' awareness of the benefits – at both an individual and community level - of tourism more generally, which may thus also increase support for tourism development (Andereck and Nyaupane 2011). Residents involved in the process of tourism development have greater opportunity to increase the benefits and decrease the costs of tourism development within their community by shaping the process at an early stage (Andereck and Nyaupane 2011; Nicholas et al. 2009), potentially resulting in increased support for tourism development (Rasoolimanesh et al., 2015; Zuo et al., 2017). Additionally, within the heritage tourism context, involvement may allow residents to shape tourism planning in a manner that promotes and conserves local culture, identity, and heritage (Rasoolimanesh et al., 2017a). Therefore, consistent with WTSFR, residents with greater involvement in the tourism development process are often more positive about the impact tourism can have on their community (Andereck and Nyaupane 2011; Nicholas et al. 2009). Thus:

H10: *Community involvement has a positive direct effect on support for tourism development.*

H11: *Community involvement has a positive direct effect on residents' perceptions towards tourism development.*

Mediating Role of Residents' Perceptions

As raised prior, Boley et al. (2014) and Perdue et al. (1990) assert that further scholarly examination is required in order to better understand residents' perceptions of tourism development and support for tourism development. Here, Boley et al. (2014), Perdue et al. (1990), and Zuo et al. (2017) recommended that a Weberian 'notions of rationality' lens (alongside SET) can capture the interplay between the antecedents of, residents' perceptions of, and subsequent support for, tourism development. Therefore, studies underpinned by Weberian notions of rationality can "…capture the complex attitudes and behaviours of residents toward tourism" (Nunkoo and Ramkissoon 2009, 339).

Literature also hypothesizes the direct effects of various antecedents, including community attachment, environmental attitudes, cultural attitudes, economic gain and community involvement, demonstrating how each influences residents' support for tourism development (cf. Nunkoo and Ramikissoon 2011; Stylidis et al. 2014; Rasoolimanesh et al. 2017d, 2017b; Woosnam et al. 2018). Further, prior studies acknowledge the direct effect of residents' perceptions on their support for tourism development (Boley et al. 2014; Lee 2013; Stylidis et al. 2014; Yoon et al. 2001). However, on the whole, current discourse fails to examine the possible indirect effects of residents' perceptions toward tourism development between the various antecedent factors stated prior, and how this influences residents' support for tourism development. Thus, the following additional hypotheses are proposed:

H12: *Residents' perceptions toward tourism development mediate the relationship between community attachment and support for tourism development.*

H13: *Residents' perceptions toward tourism development mediate the relationship between environmental attitude and support for tourism development.*

H14: *Residents' perceptions toward tourism development mediate the relationship between cultural attitude and support for tourism development.*

H15: *Residents' perceptions toward tourism development mediate the relationship between economic gain and support for tourism development.*

H16: *Residents' perceptions toward tourism development mediate the relationship between community involvement and support for tourism development.*

To this end, **Figure 1** outlines the conceptual framework of this study.

[Figure 1]

Methodology

Study areas

In order to investigate the mediating role of residents' perceptions towards tourism development, this study draws upon data collected from residents of (i) Tabriz and (ii) Kashan. The historic provenance of these Iranian cities is established, with each sporting an assortment of heritage sites and cultural attractions. Tabriz is located in North-Eastern Iran, in the country's East-Azerbaijan Province, and is home to many tangible and intangible heritage assets, with some thought to date back over 2500 years. For example, the historic Bazaar Complex, the Blue Mosque, the Qajar Museum, and the Khaneh Mashrouteh represent just some of Tabriz's rich cultural heritage portfolio. Additionally, Tabriz has a long history of traditional manufacturing and cottage industries, contemporaneously considered protected

intangible heritage, with the city's carpet and craft industry internationally respected (Light et al. 2013).

The cultural and historic offering of the central-Iranian city of Kashan echoes that of Tabriz in many ways. It was once home to a significant prehistoric civilization, with evidence suggesting settlement as early as 6000BC. Again, reflecting Tabriz, Kashan houses a wide variety of cultural sites, with mosques, historic residences, and museums dominating the city's heritage landscape. Further, with regards to intangible heritage, the city is also known for its traditional approach to carpet weaving and the oral tradition surrounding the Qālišuyān rituals of Mašhad-e Ardehāl; with each ratified as intangible world heritage by UNESCO in 2010 and 2012 respectively (UNESCO 2017a, 2017b).

As such, these two historical cities were selected for this study as both serve at the forefront of Iran's burgeoning tourism landscape, attracting large numbers of domestic and international visitors thanks to their renowned cultural heritage assets. Both also characterize the recent growth in the Iranian tourism sector more generally (Taheri et al. 2019). For example, during Iran's peak Spring tourism season, 2.6 million and 1.2 million tourists visited Tabriz and Kashan respectively in 2016, with inbound tourism rising to 4.1 million and 1.4 respectively in each city during the same peak period just one year later (2017) (Statistical Center of Iran, 2016, 2017). As such, the data collected from Tabriz and Kashan may provide fresh insight into residents' perceptions towards tourism development in an under-researched yet developing context, with the potential to shape emergent notions of sustainability and destination management in the process.

Measurement

This study follows a quantitative design. A questionnaire comprised of multiple items and constructs adapted from extant literature was employed. Established scales within the field of

tourism and sustainable development research were used to measure residents' perceptions of the economic (4-items), socio-cultural (3-items), and environmental (3-items) impact of tourism development (Jurowski et al. 1997; Rasoolimanesh et al. 2019a). Rasoolimanesh et al. (2019a) argue for the potential use of a second-order construct to capture residents' perceptions. MacKenzie, Podsakoff, and Jarvis (2005, 715) note that a higher-order measurement "faithfully represents all of the conceptual distinctions that the researcher believes are important and provides the most powerful means of testing and evaluating the construct". Further, according to MacKenzie et al. (2005, 711), reflective latent variables "…posit that covariation among measures is explained by variation in an underlying common latent factor. It is for this reason that the indicators are referred to as effects indicators".

To this end, reflective constructs are characterised by: i) the direction of arrows and causality (*from* construct *to* indicator), ii) indicators that are highly correlated, and iii) indicators that are interchangeable (MacKenzie et al., 2005). However, composite (formative) constructs, "...posit that the measures jointly influence the composite latent construct, and meaning emanates from the measures to the construct in the sense that the full meaning of the composite latent construct is derived from its measures" (MacKenzie et al. 2005, 712). For composite constructs, "the measures are not hypothesized to be caused— or determined— by the composite latent variable, the model itself does not assume or require the measures to be correlated...Therefore, internal consistency reliability is not an appropriate standard for evaluating the adequacy of the measures in formative models" (MacKenzie et al. 2005, 712).

As such, according to MacKenzie et al. (2005, 712), "to assess the validity of formative indicators, researchers must pay particular attention to nomological and/or criterion-related validity…dropping a formative indicator from a measurement model are potentially much more damaging than the consequences of dropping a reflective indicator". Thus, the three dimensions comprising residents' perceptions (economic, socio-cultural, and

environmental impact) of tourism development are not interchangeable, yet together can establish residents' perceptions. Therefore, the residents' perceptions construct should be considered a composite second-order construct (Rasoolimanesh et al. 2019a; 2019b).

Community attachment (4-items) (Gursoy et al., 2002; Nicholas et al., 2009), environmental attitudes (3-items) (Andereck et al. 2005; Nicholas et al., 2009), cultural attitudes (4-items) (Rasoolimanesh et al., 2017b), desire for economic gain (3-items) (Jurowski et al., 1997; Rasoolimanesh et al., 2017a), sense of involvement (4-items) (Nicholas et al., 2009), and support for tourism development (5-items) (Rasoolimanesh et al. 2015) were adapted from previous studies. Participants were instructed to denote the extent to which they agreed with each questionnaire item based on a five-point scale ('strongly disagree' (1) – 'strongly agree' (5)). Due to the nature of the sample (i.e., *residents* of two *Iranian* cities), the questionnaire was conducted in the respondents' native language (Farsi). Thus, each statement was translated from English by native Farsi-fluent researchers. Therefore, to ensure that the meaning of each questionnaire item was retained and that no misinterpretations emerged, back-translation was employed (Lochrie et al. 2019). The research team interviewed five experts and conducted a pilot test with 35 residents, with the wording of some questionnaire items consequently modified based on feedback collected at this juncture.

Data collection

A questionnaire was used to collect data from residents of both Tabriz and Kashan. Given their similar cultural heritage offerings and historic provenance, the decision to collect data from these two cities was crucial in cross-validating the results of this study. Data were collected in Kashan between October and November 2017 and in Tabriz between January and March 2018. In both cities, systematic cluster sampling was employed, with a total of 404

(Kashan) and 515 (Tabriz) responses collected. Four clusters in different parts of each city were identified, with houses in these areas systematically selected to complete the questionnaire. To this end, trained research assistants were tasked with distributing and collecting the questionnaires in each city, selecting houses based on the total number of houses within each cluster (systematically), and asking residents therein whether they were willing to participate. If not, the next house was selected.

The demographic make-up of the participants from Kashan was: 62.1% (male), 37.9% (female); 15-25 (12.1%), 26-35 (38.6%), 36-45 (30.2%), 46-55 (12.6%), 56+ (6.4%) years of age; and completed diploma/degree (65.1%), postgraduate (17.1%), no tertiary education (17.8%). Conversely, 58.6% of the participating Tabriz residents were male. Regarding age, the Tabriz sample was comprised of participants aged: 15–25 (11.7%), 26–35 (39.2%), 36–45 (31.3%), 46–55 (12%) and 56+ (5.8%). In terms of 'highest completed education', the sample from Tabriz closely reflected that of Kashan, with 64.6% of respondents holding a diploma or degree, 17.3% educated to a postgraduate level, and 18.1% holding no tertiary qualifications (i.e., they *had* completed primary or secondary education, *or* had no formal education).

Data collected from each city was self-reported in nature. Thus, using Armstrong and Overton's (1977) recommendations, the data was scrutinized for non-response bias. Early and late versions of the questionnaire were compared for systematic differences in demographic variables (i.e., gender, age, and education level), with no significant differences identified at ($p < 0.05$). Next, we investigated the presence of Common Method Variance (CMV). Prior to this, we had stressed to all participants that they would not be identifiable in order to minimise the likelihood of social desirability bias. Further, when designing the questionnaire instrument, careful attention was paid to placing independent and dependent constructs in distinct sections. All constructs were entered into a principal component analysis in order to satisfy Harman's single-factor test to evaluate CMV (Gannon, Taheri and Olya, 2019). The

eigenvalue unrotated PCA solution detected six factors for the data collected in both Tabriz and Kashan. However, the highest portion of variance explained by a single factor was 35.501% (Tabriz) and 23.451% (Kashan). Further, we employed the unmeasured method factor approach, where a common method factor was introduced to the structural model (Liang et al. 2007). This revealed that the average variance illustrated was 61% (Tabriz) and 67% (Kashan) and the average method-based variance was 1.5% (Tabriz) and 1.4% (Kashan); a ratio of 40:1 and 47:1 respectively. Therefore, CMV is not a concern for this study (Podsakoff et al. 2003).

Finally, to ensure the data surpassed the level required to perform hypothesis testing and analyses, G*Power was employed to calculate the minimum sample size based on power analysis (Faul et al. 2009; Hair et al. 2017). The results suggest that the minimum sample size required (to achieve a power of 0.95) for each group was 138. The sample for both Kashan and Tabriz significantly exceeds this figure while also satisfying Reinartz et al.'s (2009) assertion that a sample size of 100 and power of 0.8 are sufficient to conduct PLS-SEM. As such, SmartPLS 3.2.7 was used to conduct data analysis (Ringle et al. 2015).

Results and Findings

Measurement model assessment

PLS-SEM was employed to assess both the measurement and structural models as the framework is relatively complex, comprised of both reflective and composite constructs (Hair et al. 2017). Initially, attention was focused on ensuring the reliability and validity of the reflective constructs (community attachment (CAC); environmental attitude (EAT); cultural attitude (CAT); economic gain (ECG); involvement (INV); and support for tourism development (SUP)). This was extended to include the three reflective dimensions of residents' perceptions (RP): economic (ECO_RP), environmental (ENV_RP), and socio-

cultural (SCUL_RP). As per Rasoolimanesh et al. (2019a), the second stage saw '*residents' perceptions*' (RP) established as a second-order composite construct based on the score of its associated dimensions, with the related criteria applied to assess RP as a composite second-order construct for the data from both cities.

Next, the reliability and convergent validity of the reflective measurement models was assessed. Here, we considered the outer loadings of the items associated with each construct. Further, composite reliability (CR) and average variance extracted (AVE) were investigated (Gannon et al., 2017). To establish reliability and convergent validity, the loadings, CR, and AVE values should surpass 0.7, 0.7, and 0.5 respectively (Ali et al. 2018). Nonetheless, loadings between 0.5 and 0.7 remain acceptable if CR and AVE values reach the aforementioned threshold (Hair et al. 2017). **Table 1** and **Table 2** provide an overview of these results for all reflective constructs in stage one, demonstrating that reliability and convergent validity is established for both groups of respondents.

[Table 1]

[Table 2]

Following this, discriminant validity was examined. Here, the Fornell-Larcker criterion and heterotrait-monotrait (HTMT) approaches were employed (Voorhees et al. 2016). Extant research suggests that acceptable HTMT values can be lower than either 0.85 or 0.9 (Henseler et al. 2015); this study adopted the more rigorous $HTMT_{.85.}$ To this end, **Table 3** shows that discriminant validity was acceptable across the data from both cities. Further, as per Fornell and Larcker (1981), the results demonstrate that the square root of the AVE for each construct is greater than its correlation with all other constructs; again, demonstrating discriminant validity (**Table 4**).

[Table 3]

[Table 4]

Next, the measurement model of RP as a second-order composite construct was assessed. To assess the measurement model of a composite construct, three criteria should be checked. Multi-collinearity, via variance inflation factors (VIF), should be <5; the outer weights of associated items of the composite construct should be significant; and nomological validity should be established (Henseler 2017; Rasoolimanesh and Ali 2018). **Table 1** and **Table 2** demonstrate that all VIF values were acceptable as they are <5 (Hair et al. 2017).

Additionally, the significance of all outer weights was established via the confidence interval bias corrected approach (0.95). Further, to assess the composite construct, its nomological validity was examined (Henseler 2017; Rasoolimanesh and Ali 2018). Here, following the inclusion of the composite construct, the fit indices should not be worse than prior to including it in the model (Henseler 2017). The Standardized Root Mean Square Residual (SRMR) for the saturated model before and after including the composite construct was 0.073; below the recommended threshold (0.08) (Hu and Bentler 1999), indicating an acceptable model fit and acceptable nomological validity for the composite second-order RP construct. Following Yalinay et al.'s (2018) recommendation, the correlation between the three underlying dimensions of RP and support for tourism development were further tested (**Table 5**). The findings indicate that there are significant relationships between the three underlying dimensions and residents' support for tourism development.

[Table 5]

Structural model assessment and multi-group analysis

Table 6 and **Figure 2** show the results of the hypothesis assessment for both Kashan and Tabriz. The results highlight the significant effect of residents' perceptions (RP) on support for tourism development (SUP) for both cases (**H1**). Moreover, the results support the effects

of community attachment (CAC), environmental attitude (EAT), and economic gain (ECG) on RP (**H3, H5** and **H9**), yet do not support the effects of cultural attitude (CAT) and involvement (INV) on RP (**H7** and **H11**) for both Kashan and Tabriz.

In order to assess potential mediation effects, we applied the product coefficients approach (indirect effect), assessing the significance of indirect effects using bias-corrected bootstrap confidence intervals *(CIs)* (cf. Hayes and Scharkow 2013; Zhao et al. 2010). **Table 6** shows the insignificant direct effect of CAC on SUP (**H2**), whereas the indirect effect of CAC on SUP through RP (**H12**) for both Kashan and Tabriz were significant. Therefore, the results confirm the mediating role of RP between CAC and SUP.

Further, the results demonstrate the significant and strong direct effect of EAT on SUP (**H4**) for both study areas. Moreover, the results confirm the significant indirect effect of EAT on SUP through RP (**H13**), and the mediating role of RP between EAT and SUP. However, the results show a far stronger direct (compared to indirect) effect. For both study areas, the results do not support either the direct or the indirect effect of CAT on SUP (**H6** and **H14**). **Table 6** shows the insignificant direct effect of ECG on SUP (**H8**), whereas the indirect effect of ECG on SUP through RP is positive and significant (**H15**) in both Kashan and Tabriz. Finally, the results demonstrate the significant direct effect of INV on SUP (**H10**); yet also show the insignificant indirect effect of INV on SUP through RP (**H16**). Thus, the results do not support the mediating role of RP between INV and SUP in either Kashan or Tabriz.

Multi-group analysis (MGA) was used to compare the data collected in Tabriz and Kashan in order to cross-validate the results (Taheri, Olya, Ali and Gannon 2019). Prior to performing MGA, we established measurement invariance using the three-step measurement invariance of composites (MICOM) approach (Henseler et al. 2016). **Table 7** shows the MICOM results, demonstrating full measurement invariance based on (1) configural

invariance assessment, (2) compositional invariance assessment, and (3) the assessment of equal means and variances (Rasoolimanesh et al. 2017d, 2017c). Having established measurement invariance, we performed MGA to compare the Kashan and Tabriz results using the non-parametric permutation test (Chin and Dibbern 2010). The results show non-significant differences between the two cities for all hypotheses (direct and indirect effects), confirming the results across both study areas and cross-validating the assessment of the direct and indirect effects accordingly.

[Table 6]

[Table 7]

[Figure 2]

Discussion

Data collected from residents of the historical Iranian cities of Tabriz and Kashan was compared in order to examine the mediating role residents' perceptions of tourism impacts plays in shaping the relationships between influencing factors and support for tourism development. In doing so, this study combined SET and WTSFR in order to provide the overarching framework from which to better understand residents' perceptions of tourism development and their support for tourism development. As such, the findings correspond with results from previous studies, many of which have been conducted in different cultural settings (e.g., Boley et al. 2014; McGehee 2007; Nunkoo et al. 2013; Rasoolimanesh et al. 2015; Perdue et al. 1990; Zuo et al. 2017). The validity and reliability of the projected model of the path relationships among factors influencing resident's perceptions, the mediating role of residents' perceptions of, and support for, tourism development was supported for the majority of hypotheses. Finally, MGA revealed no significant differences between the two cities for all direct and indirect hypotheses, further validating the results of the study.

These results reinforce the propositions of SET and confirm the positive, significant effect of residents' perceptions on their support for tourism development (cf. Almeida-Garcia et al. 2016; Andereck et al. 2005; Hall and Page 2014; Kim et al. 2013; Vareiro et al. 2013). Prior studies argue that residents who perceive more positive tourism impacts will support tourism development, while residents who perceive less positive tourism impacts are less likely to support tourism development (Nunkoo and Ramkissoon 2011; Rasoolimanesh et al. 2015, 2019). The results of the current study are therefore consistent with prior research, signifying the positive and significant effect of RP on SUP in both Kashan and Tabriz. Thus, the results contribute toward a better understanding of the *exchange* process identified by SET, as recognized across tourism development discourse.

Further, in line with WTSFR, the effects of influencing factors (including community attachment, environmental attitudes, cultural attitudes, economic gain, and involvement) on residents' perceptions toward tourism development were examined. Previous studies confirmed the positive effects of community attachment (Besculides et al. 2012; Nicholas et al. 2009; Látková and Vogt 2012; Moghavvemi et al. 2017), environmental attitude (Rasoolimanesh et al. 2017b; Woosnam et al. 2018), and economic gain (Boley et al. 2012; Zuo et al. 2017) on residents' perceptions. Again, the results of this study echo extant knowledge. However, in contrast to prior studies (cf. Andereck and Nyaupane 2011; Nunkoo and Ramikissoon 2011; Woosnam et al. 2018), the results did not support the effects of cultural attitudes and involvement on the above in either Tabriz or Kashan.

Yet, the core objective of this study was to assess the mediating role of residents' perceptions on the relationship between antecedent factors (e.g., community attachment, environmental attitudes, cultural attitudes, economic gain, and involvement) and support for tourism development, and to compare the direct and indirect effects accordingly. Here, the results showed the significant indirect effect of CAC on SUP through RP, whereas the direct

effect of CAC on SUP is not significant. Therefore, community attachment is shown to increase residents' perceptions of tourism impacts, which may then increase their support for tourism development. Moreover, the results confirmed the significant indirect effect of EAT on SUP, alongside the mediating role of RP between EAT and SUP. The results also showed the significant and strong direct effect of EAT on SUP when compared to the indirect effect. Therefore, the mediating role of RP between EAT and SUP is complementary (Nitzl et al. 2016; Zho et al. 2010); improving environmental attitudes increases support for tourism development directly and indirectly by increasing residents' perceptions toward tourism development.

However, the results did not support either the direct or the indirect effect of CAT on SUP for both study areas, revealing that the residents of both Kashan and Tabriz did not believe that increased tourism was likely to impact upon their lifestyle and traditional culture. CAT is measured based on three items: "*local and traditional culture should be preserved*", "*the lifestyle of local residents should be protected*", and "*My traditions and culture are very important for me*". The insignificant results demonstrate homogeneity among residents of both cities regarding their cultural attitudes, the perceived importance of traditions and culture, and whether residents prioritize heritage preservation when faced with increased tourism development. Thus, it is perhaps unsurprising that the residents of Kashan and Tabriz, as renowned historical cities, are protective of their culture and wish to preserve it regardless of positive or negative perceptions toward, or support for, tourism development (cf. Cisneros-Martínez et al. 2018).

Additionally, the findings confirmed the positive significant indirect effect of ECG on SUP and the mediating role of RP; but could not support the direct effect of ECG on SUP. This suggests that economic gain influences residents' perceptions first, and that improving residents' perceptions will increase their support for tourism development. Finally, the results

did not support the mediating role of RP between INV and SUP. This could stem from the current low levels of resident involvement in the process of tourism development and heritage conservation within Kashan and Tabriz.

Conclusions, Practical Implications and Limitations

This paper examined the mediating role residents' perceptions play between relevant antecedent factors (e.g. community attachment, environmental attitude, cultural attitude, economic gain, and involvement) and support for tourism development across two historical Iranian cities, Kashan and Tabriz.

Previous studies have investigated the effects of influencing factors on residents' perceptions and support for tourism development using different theories. However, to the best of our knowledge, the mediating role of residents' perceptions remains under-explored, with few studies comparing the *direct* effects of influencing factors on support for tourism development and also their *indirect* effects through residents' perceptions toward tourism development. Therefore, this serves as the core theoretical contribution of this study. In particular, the results revealed that the direct effects of influencing factors on support for tourism development are stronger when compared to their indirect effects, and when residents' perceptions is applied as a mediator. This theoretical finding thus challenges extant knowledge by highlighting the importance of the direct effects of influencing factors on support for tourism development. Further, this study was conducted in two historical cities in Iran; an emergent context which has been overlooked for the most part (cf. Gannon et al. 2019), particularly with regards to residents' perceptions of tourism development. This serves as another significant contribution, with the study conducted in two different areas in order to cross-validate the results using the recently developed MGA technique.

Several practical implications also emerge. The results confirmed the direct and/or indirect effects of community attachment, environmental attitude, economic gain, and involvement on residents' support for tourism development in the historical cities of Kashan and Tabriz. The support of residents may prove critical to producing a sustainable tourism economy in the developing Iranian context. To gain residents' support, local authorities and tourism planners should invest both time and money in increasing community attachment and residents' sense of belonging, and focus on generating a sense of positivity and pride for community members toward their locale. Moreover, by carefully crafting marketing communications and creating awareness through targeted campaigns, the environmental attitudes of residents toward preserving the local natural and historical assets and the extant social environment can be used as a platform to increase their support for tourism development.

Further, the results of the mediation assessment of residents' perceptions between influencing factors and support for tourism development revealed higher direct effects for most influencing factors when compared to their indirect effects. This suggests that local authorities should pay closer attention to influencing factors in order to increase support for tourism development, and that residents' perceptions toward tourism development are not critical in shaping these relationships in isolation. Instead, improving the quality of destination attributes closely related to the established influencing factors examined throughout this study should lead to increased resident support for tourism development as an ultimate outcome. Therefore, local authorities and tourism managers should pay closer attention to the aforementioned influencing factors when designing tourism development strategies.

The level of involvement in tourism planning and development, alongside heritage management and conservation, is also considered to be low in Iran (Taheri et al. 2018), which

may serve as a possible explanation for the insignificant effect of involvement on residents' perceptions toward tourism development. The findings suggest that the residents of these historical cities do not believe that tourism can impact on their lifestyle and traditional culture. Therefore, the results showed the insignificant effect of cultural attitudes on residents' perceptions toward tourism development. This focus on preservation and conservation is consistent, with the highest effect on residents' perceptions of tourism impacts stemming from environmental attitudes, which refers to the protection of nature, heritage, and community environment, followed by economic gain and community attachment. Nonetheless, by increasing residents' awareness of the economic benefits of increased tourism, local authorities may be able to attract greater support and may thus be able to continue the process of sustainable tourism development in Tabriz and Kashan.

Finally, increasing the involvement of residents in the process of tourism development and heritage conservation may increase their support for tourism development. Therefore, the local authorities of Kashan and Tabriz should reconsider extant policies and processes concerning community engagement in order to facilitate and enhance increased resident involvement, attachment, and participation. This approach may influence residents' perceptions of tourism impacts over time, but their support for further development must be regularly monitored in order to ensure that tourism development initiatives continue to meet the needs of the local community. It is therefore also important to build trust between tourism developers, local authorities, and residents (cf. Taheri, Gannon and Kesgin 2019). As residents typically hold little power over the tourism planning process, they may not trust that local authorities and development organisations are working in their best interests. Thus, further attention should be given to building trust, developing a sense of 'power sharing', and educating residents on the benefits and threats inherent to heritage tourism development. To this end, Zuo et al. (2017, 61) highlight that it is crucial to ensure that residents do not feel

that they embody “a powerless community [through] distrust in local government [and] strong central government intervention”.

This study is thus novel in its investigation of the mediating role of residents’ perceptions between influencing factors and support for tourism development. However, as with any piece of research, limitations exist. *First,* we only examined the mediating effect for some influencing factors (e.g., community attachment, environmental attitudes, cultural attitudes, economic gain, and involvement). Several other influencing factors could be investigated in future studies (e.g., place image, safety and security, personality, residents’ utilisation of heritage and tourism resources, wellbeing, and quality-of-life). *Second,* we examined the mediating role of residents perceptions based on data from two historical cities in Iran. In order to generalise the results, future studies should be conducted within and across alternative developed and developing contexts, and also in different types of tourism destinations (i.e., not restricted to the cultural heritage context). Thus, while this study employed CMV tests to overcome possible causality issues, “causality is notoriously complex and contested” (Curran et al. 2016, 1252). Therefore, the application of this model in other cultural settings can further establish the hypothesised direct and indirect relationships. *Third,* future studies should explore the hypothesised direct and indirect paths over time; offering a longitudinal approach to heritage and tourism development studies. This, in turn, may minimise the drawbacks of a cross-sectional design and the risk of self-selection bias (Podsakoff et al. 2003). *Finally,* future research should apply a qualitative approach to identify why some of the hypothesised relationships were not supported.

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Figure 1. Conceptual framework

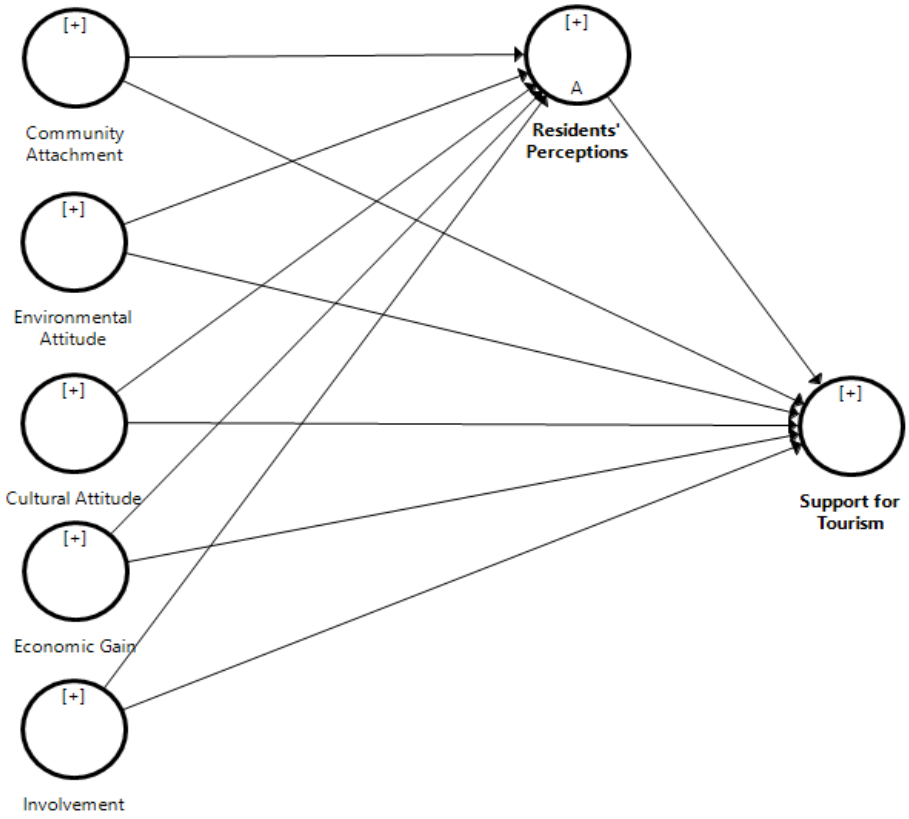

Figure 2. Results: Assessment of structural model

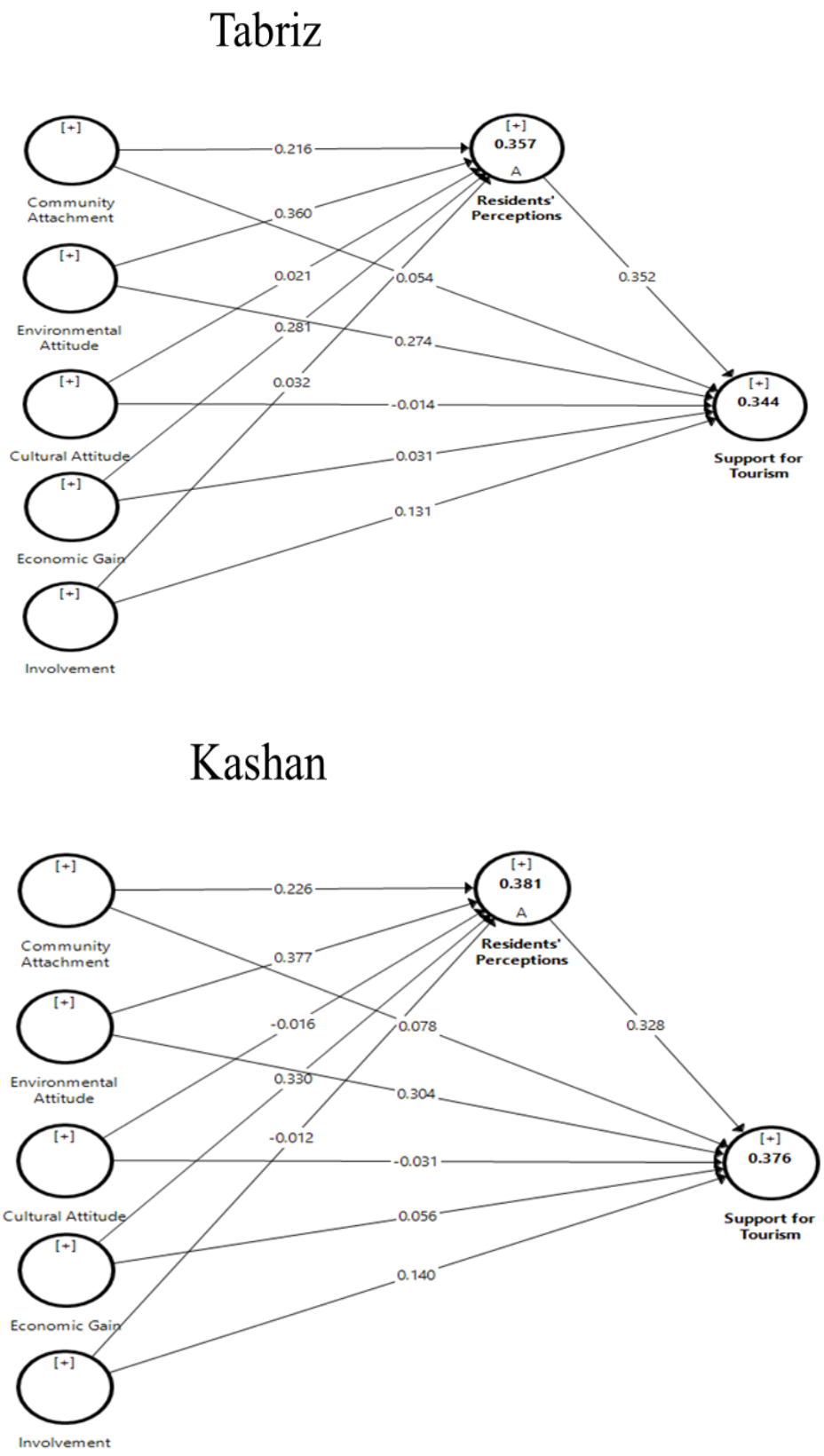

Table 1. Results: Assessment of reflective measurement and composite models (Tabriz)

Construct	Items	Type	Loadings/ Weights	CR	AVE
Community Attachment		Reflective		0.838	0.565
	CAC1		0.751		
	CAC2		0.765		
	CAC3		0.810		
	CAC4		0.674		
Environmental Attitude		Reflective		0.835	0.629
	ENT1		0.760		
	ENT2		0.832		
	ENT3		0.785		
Cultural Attitude		Reflective		0.850	0.655
	CAT1		0.759		
	CAT2		0.834		
	CAT3		0.833		
	CAT4				
Economic Gain		Reflective		0.856	0.666
	ECG1		0.886		
	ECG2		0.796		
	ECG3		0.762		
Involvement		Reflective		0.880	0.648
	INV1		0.836		
	INV2		0.848		
	INV3		0.812		
	INV4		0.718		
Economic Perceptions		Reflective		0.803	0.512
	ECO_RP1		0.765		
	ECO_RP2		0.840		
	ECO_RP3		0.515		
	ECO_RP4		0.702		
Environmental Perceptions		Reflective		0.758	0.519
	ENV_RP1		0.751		
	ENV_RP2		0.843		
	ENV_RP3		0.530		
Socio-Cultural Perceptions		Reflective		0.794	0.563
	SCUL_RP1		0.755		
	SCUL_PR2		0.735		
	SCUL_PR3		0.761		
Support for Tourism		Reflective		0.842	0.519
	SUP1		0.572		
	SUP2		0.736		
	SUP3		0.775		
	SUP4		0.783		
	SUP5		0.714		
Residents' Perceptions		Composite		$CI\_BC_{0.95}$	VIF
	ECO_RP		0.465	[0.436, 0.504]	1.378
	ENV_RP		0.364	[0.334, 0.394]	1.375
	SCUL_RP		0.421	[0.390, 0.459]	1.472

Note: See Appendix 1 for the names of the items

Table 2. Results: Assessment of reflective measurement and composite models (Kashan)

Construct	Items	Type	Loadings/ Weights	CR	AVE
Community Attachment		Reflective		0.841	0.570
	CAC1		0.734		
	CAC2		0.775		
	CAC3		0.816		
	CAC4		0.689		
Environmental Attitude		Reflective		0.844	0.643
	ENT1		0.806		
	ENT2		0.835		
	ENT3		0.763		
Cultural Attitude		Reflective		0.866	0.684
	CAT1		0.769		
	CAT2		0.860		
	CAT3		0.849		
	CAT4				
Economic Gain		Reflective		0.882	0.714
	ECG1		0.888		
	ECG2		0.834		
	ECG3		0.811		
Involvement		Reflective		0.886	0.663
	INV1		0.866		
	INV2		0.890		
	INV3		0.807		
	INV4		0.679		
Economic Perceptions		Reflective		0.831	0.556
	ECO_RP1		0.804		
	ECO_RP2		0.846		
	ECO_RP3		0.595		
	ECO_RP4		0.713		
Environmental Perceptions		Reflective		0.857	0.667
	ENV_RP1		0.774		
	ENV_RP2		0.832		
	ENV_RP3		0.843		
Socio-Cultural Perceptions		Reflective		0.802	0.575
	SCUL_RP1		0.753		
	SCUL_PR2		0.744		
	SCUL_PR3		0.777		
Support for Tourism		Reflective		0.839	0.514
	SUP1		0.551		
	SUP2		0.730		
	SUP3		0.786		
	SUP4		0.771		
	SUP5		0.721		
Residents' Perceptions		Composite		$CI\_BC_{0.95}$	VIF
	ECO_RP		0.444	[0.417, 0.485]	1.416
	ENV_RP		0.370	[0.342, 0.400]	1.455
	SCUL_RP		0.424	[0.395, 0.464]	1.475

Note: See Appendix 1 for the names of the items

Table 3. Discriminant Validity; HTMT

Constructs	CAC	EAT	CAT	ECG	INV	ECO_RP	ENV_RP	SCUL_RP	SUP	CAC	EAT	CAT	ECG	INV	ECO_RP	ENV_RP	SCUL_RP	SUP
	Tabriz									Kashan								
CAC																		
EAT	0.504									0.471								
CAT	0.466	0.594								0.447	0.557							
ECG	0.123	0.164	0.225							0.121	0.159	0.215						
INV	0.055	0.169	0.129	0.758						0.067	0.130	0.115	0.755					
ECO_RP	0.520	0.538	0.353	0.351	0.182					0.486	0.514	0.311	0.341	0.128				
ENV_RP	0.398	0.479	0.383	0.341	0.253	0.688				0.339	0.420	0.283	0.349	0.237	0.636			
SCUL_RP	0.396	0.574	0.331	0.344	0.173	0.731	0.818			0.433	0.595	0.305	0.361	0.199	0.687	0.732		
SUP	0.354	0.593	0.302	0.269	0.198	0.608	0.549	0.601		0.376	0.623	0.287	0.315	0.224	0.579	0.490	0.617	

Note 1: community attachment (CAC); environmental attitude (EAT); cultural attitude (CAT); economic gain (ECG); involvement (INV); support for tourism development (SUP); economic perceptions (ECO_RP), environmental perceptions (ENV_RP), and socio-cultural perceptions (SCUL_RP).

Note 2: The numbers show the HTMT ration for two constructs (See Henseler et al., 2015 for formula to calculate HTMT).

Table 4. Discriminant Validity; Fornell–Larcker

Constructs	CAC	EAT	CAT	ECG	INV	ECO_ RP	ENV_ RP	SCUL _RP	SUP	CAC	EAT	CAT	ECG	INV	ECO_ RP	ENV_ RP	SCUL_ RP	SUP
	Tabriz									Kashan								
CAC	**0.752**									**0.755**								
EAT	0.364	**0.793**								0.352	**0.802**							
CAT	0.348	0.427	**0.809**							0.336	0.409	**0.827**						
ECG	0.116	0.047	0.178	**0.816**						0.124	0.055	0.184	**0.845**					
INV	-0.019	-0.123	-0.014	0.578	**0.805**					-0.019	-0.090	0.010	0.601	**0.815**				
ECO_RP	0.373	0.408	0.248	0.283	0.041	**0.716**				0.372	0.403	0.233	0.293	0.014	**0.746**			
ENV_RP	0.263	0.302	0.242	0.262	0.184	0.417	**0.720**			0.271	0.314	0.214	0.302	0.195	0.470	**0.817**		
SCUL_RP	0.277	0.382	0.231	0.288	0.126	0.478	0.480	**0.750**		0.307	0.407	0.220	0.299	0.154	0.474	0.506	**0.758**	
SUP	0.285	0.434	0.229	0.242	0.152	0.468	0.365	0.416	**0.720**	0.309	0.462	0.219	0.278	0.177	0.463	0.380	0.440	**0.717**

Note 1: community attachment (CAC); environmental attitude (EAT); cultural attitude (CAT); economic gain (ECG); involvement (INV); support for tourism development (SUP); economic perceptions (ECO_RP), environmental perceptions (ENV_RP), and socio-cultural perceptions (SCUL_RP).

Note 2: The bold numbers in diagonal are square root of AVE of each construct, and other numbers are correlation between constructs.

Table 5. Correlations between three dimensions of residents' perceptions and support for tourism development

	Tabriz			Kashan		
Dimensions	Correlations	Lower bound CI	Higher bound CI	Correlations	Lower bound CI	Higher bound CI
ECO_RP <-> SUP	0.468	0.385	0.576	0.463	0.365	0.572
ENV_RP <-> SUP	0.365	0.272	0.458	0.380	0.280	0.484
SCUL_RP <-> SUP	0.416	0.322	0.510	0.440	0.335	0.535

Table 6. Results: Structural Model

Hypothesis	Direct/ Indirect effect	Path Coefficient		Confidence Interval (95%) Bias Corrected		Supported		*P*-value Difference
		Kashan	Tabriz	Kashan	Tabriz	Kashan	Tabriz	Permutation test *p value*
H1	RP → SUP	0.328	0.352	[0.230, 0.420]	[0.261, 0.443]	YES	YES	0.396
H2	CAC → SUP	0.078	0.054	[-0.007, 0.150]	[-0.024, 0.119]	NO	NO	0.364
H3	CAC → RP	0.226	0.216	[0.122, 0.327]	[0.127, 0.310]	YES	YES	0.461
H4	EAT → SUP	0.304	0.274	[0.228, 0.376]	[0.202, 0.337]	YES	YES	0.313
H5	EAT → RP	0.377	0.360	[0.287, 0.471]	[0.279, 0.439]	YES	YES	0.408
H6	CAT → SUP	-0.031	-0.014	[-0.111, 0.052]	[-0.086, 0.065]	NO	NO	0.415
H7	CAT → RP	-0.016	0.021	[-0.113, 0.076]	[-0.069, 0.104]	NO	NO	0.314
H8	ECG → SUP	0.056	0.031	[-0.040, 0.152]	[-0.054, 0.113]	NO	NO	0.386
H9	ECG → RP	0.330	0.281	[0.251, 0.414]	[0.211, 0.355]	YES	YES	0.221
H10	INV → SUP	0.140	0.131	[0.054, 0.218]	0.061, 0.195]	YES	YES	0.444
H11	INV → RP	-0.012	0.032	[-0.106, 0.068]	[-0.047, 0.099]	NO	NO	0.257
H12	CAC → RP → SUP	0.074	0.076	[0.042, 0.122]	[0.044, 0.119]	YES	YES	0.487
H13	EAT → RP → SUP	0.124	0.127	[0.081, 0.181]	[0.088. 0.178]	YES	YES	0.489
H14	CAT → RP → SUP	-0.005	0.007	[-0.040, 0.024]	[-0.025, 0.037]	NO	NO	0.313
H15	ECG → RP → SUP	0.108	0.099	[0.072, 0.156]	[0.068, 0.140]	YES	YES	0.381
H16	INV → RP → SUP	-0.004	0.011	[-0.036, 0.022]	[-0.016, 0.036]	NO	NO	0.254

Note: community attachment (CAC); environmental attitude (EAT); cultural attitude (CAT); economic gain (ECG); involvement (INV); support for tourism development (SUP); and residents' perceptions (RP).

Table 7. Results: Invariance measurement testing using permutation

Constructs	Configural invariance (Same algorithms for both groups)	Compositional invariance (Correlation =1)		Partial measurement invariance established	*Equal mean assessment*			*Equal variance assessment*			Full m*easurement invariance established*
		C=1	Confidence Interval (CIs)		Differences	Confidence Interval (CIs)	Equal	Differences	Confidence Interval (CIs)	Equal	
CAC	Yes	1.000	[0.991, 1.000]	Yes	0.023	[-0.110, 0.110]	Yes	0.032	[-0.239, 0.237]	Yes	Yes
EAT	Yes	0.999	[0.994, 1.000]	Yes	0.017	[-0.107, 0.110]	Yes	0.055	[-0.201, 0.188]	Yes	Yes
CAT	Yes	1.000	[0.991, 1.000]	Yes	0.016	[-0.112, 0.111]	Yes	0.106	[-0.238, 0.223]	Yes	Yes
ECG	Yes	0.999	[0.989, 1.000]	Yes	0.108	[-0.109, 0.110]	Yes	0.038	[-0.110, 0.105]	Yes	Yes
INV	Yes	0.999	[0.956, 1.000]	Yes	0.068	[-0.107, 0.110]	Yes	0.008	[-0.108, 0.108]	Yes	Yes
RP	Yes	1.000	[0.999, 1.000]	Yes	0.070	[-0.109, 0.107]	Yes	0.097	[-0.247, 0.237]	Yes	Yes
SUP	Yes	1.000	[0.996, 1.000]	Yes	0.010	[-0109, 0.111]	Yes	0.009	[-0.302, 0.285]	Yes	Yes

Note: community attachment (CAC); environmental attitude (EAT); cultural attitude (CAT); economic gain (ECG); involvement (INV); support for tourism development (SUP); and residents' perceptions (RP).

Appendix 1. Adapted items

	Questions
	Community Attachment
CAC1	I have positive feelings for Kashan/Tabriz
CAC2	I feel a sense of belonging to this place.
CAC3	I have an emotional attachment to this place - it has meaning to me.
CAC4	I am willing to invest my talent or time to make this an even better place.
	Environmental Attitude
EAT1	The diversity of heritage must be valued and protected
EAT2	Community environment must be protected now and in the future
EAT3	The development of infrastructures and public facilities, as well private sector should not damage heritage areas.
	Cultural Attitude
CAT1	The local and traditional culture should be preserved
CAT2	The lifestyle of local residents should be protected
CAT3	My traditions and culture is very important for me
	Economic Gain
ECG1	Increasing the number of visitors in Kashan/Tabriz affects on my current household income
ECG2	High percentage of my current income comes from the money spent by visitors
ECG3	Most of the income of the company I work for (or business you own) comes from the tourist trade
	Involvement
INV1	The residents of Kashan/Tabriz have been involved in the management of heritage
INV2	The residents of Kashan/Tabriz have been involved in the process of tourism development and planning
INV3	Most of time my opinions have been asked regarding planning and development of tourism
	Economic Perceptions
ECO_RP1	Tourism development create more jobs for my community.

ECO_RP2	Tourism development attract more investment to my community.
ECO_RP3	Our standard of living increase considerably because of tourism
ECO_RP4	Tourism development provides more infrastructures and public facilities like, roads, shopping malls, etc.
	Environmental Perceptions
ENV_RP1	Tourism development help to preserve the natural environment
ENV_RP2	Tourism development help to preserve the historical buildings
ENV_RP3	Tourism development improve the area's appearance
	Socio-Cultural Perceptions
SCUL_RP1	Tourism development preserves cultural identity of host residents.
SCUL_RP2	Tourism development promotes cultural exchange.
SCUL_RP3	Tourism development increases recreation facilities and opportunities.
	Support for Tourism Development
SUP1	The residents should participate in tourism development conservation programmes of heritage sites
SUP2	I believe that tourism should be actively encouraged in my community.
SUP3	I support tourism and would like to see it becomes an important part of my community.
SUP4	The local authorities and state government should support the promotion of tourism
SUP5	It is important to develop plans to manage the conservation of historical site and growth of tourism.