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Memorable Tourism Experience at Smart Tourism Destinations: Do Travelers' Residential Tourism Clusters Matter?

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Abstract

Despite strong evidence from the social ecological model suggesting the influences of the residential built environment on individuals' behaviors, the effects of travelers' residential tourism clusters on their tourism experience at smart tourism destinations have not been investigated. Thus, this study aims to understand the effects of travelers' residential tourism clusters on their memorable tourism experience at a smart tourism destination. To achieve the purpose, this study investigated (1) how various tourism products influence travelers' memorable experiences and future behavioral intentions, and (2) the moderating effect of travelers' residential tourism clusters in the proposed relationships. Findings showed the positive effects of tourism resources and smart tourism technologies' interactivity and personalization on memorable tourism experience, and the group difference between travelers from more-tourism clustered and less-tourism clustered areas. These findings can help tourism scholars and practitioners understand the effects of both destination-related attributes and traveler-related attributes on travelers' memorable experience at smart tourism destinations.

Keywords: Memorable experience; Social ecological model; Smart tourism destinations; Tourism resources; Smart tourism technology; Residential tourism clusters

HIGHLIGHTS

- The impacts of various tourism products on memorable experience were examined.
- We identified how travelers' residential tourism clusters affected traveler behavior.
- We investigated various smart tourism destination attributes on memorable experience.
- We found how travelers' residential tourism clusters affected memorable experience.
- The effect of memorable experience was stronger for travelers from more-clustered areas.

1. INTRODUCTION

With the increasing importance of technology and smartness, much research has been focused on smart tourism destinations from different stakeholders' perspectives (Li et al., 2017; Mehraliyev et al., 2020). The key concept of a smart destination lies in smartness, which refers to the adequate use of information communication technologies. Hence, prior studies were primarily conducted to understand effects of travelers' attitudes and adoption of smart tourism technologies, and attributes of smart tourism technologies on their travel experience.

Although prior studies have focused on the roles of smart tourism technologies in enhancing the tourism experience (Balakrishnan et al., 2021; Jeong & Shin, 2020; Lee et al., 2018; Pai et al., 2020; Um & Chung, 2021), smart tourism technologies are not the core products of the tourism industry. The core product of the tourism industry is tourism resources, which are the fundamentals and key to attract travelers to specific destinations (Byrd et al., 2016). According to Kotler's (2006) product levels, augmented products refer to products that differentiate themselves from their competitors, including accessibility (Duan et al., 2018). Smart tourism technology is one of the key components of smart tourism destinations as it would be the focal infrastructure to access relevant information and offer personalized/interactive services for better tourism experience (Azis et al., 2020). Thus, smart tourism technologies can be seen as augmented products in the tourism industry.

However, travelers' experience is different from other types of consumption in that it is generated by the interactions of multiple components that are closely interrelated. For example, tourism resources, such as tourist attractions and natural resources, can play a pivotal role as the center of travelers' experience, whereas such elements as service and involvement are also important parts of the overall tourism products (Smith, 1994). Furthermore, tourism-related products offer synergetic effects rather than independent to each other. Therefore, it is critical to understand how different levels of tourism-related products interplay and enhance travelers' experience at a destination.

As creating memorable tourism experience for travelers is critical in retaining destination competitiveness (Sugathan & Ranjan, 2019), much research has been devoted to fully comprehend the factors associated with memorable tourism experience. Many studies examined the psychological factors (e.g., motivation, involvement) that affect travelers' memorable tourism experience. On the other hand, recognizing that travelers seek something that is not commonly available in their residential tourism environment and travel experience is highly contextual (Stamboulis & Skayannis, 2003), previous studies have investigated destination-related attributes that affect memorable tourism experience, such as core services and service management (Hwang & Lee, 2018), and destination image (Zhang et al., 2018). However, it is often ignored that travelers visit a destination with different identities and backgrounds (Sugathan & Ranjan, 2019).

According to the social ecological model (Bronfenbrenner, 1979), human behaviors are influenced by various factors, including their residential built environment (e.g., land-use patterns of the neighborhood that provides opportunities for physical activities and travel) (Tang et al., 2011). When the social ecological model is applied to the tourism context, travelers' behaviors at destinations might be strongly affected by their residential tourism environment, such as the tourism industry clusters ("tourism clusters"). Accordingly, individual travelers'

tourism clusters in their residential area ("residential tourism clusters") should not be neglected because they develop unique expectations toward tourism services concerning their past experience with the same or related services (Zeithaml et al., 1985), possibly influencing the memorability of their tourism experiences. As travelers look for something different from their daily life (Cetin, 2020), it might be difficult for them to create memorable tourism experience if a smart tourism destination is not much different from their place of residence in terms of tourism products/services. Considering the primary purpose of smart tourism destinations lies in the enrichment of tourism experience, it is essential to understand how travelers' residential tourism clusters affect their travel experience in conjunction with destination-related attributes, such as tourism resources and augmented products (e.g., smart tourism technologies). However, to date, the effects of travelers' residential tourism clusters in the relationships among tourism products, memorable experience, and intention remain under-researched. For example, it is unclear whether the effects of smart tourism technologies would be stronger for those travelers from the areas where tourism is not much developed. Thus, it is difficult for local governments to develop appropriate tourist destination marketing strategies.

This study addresses these research gaps by examining (1) how the different tourism-related products of a smart tourism destination affect travelers' memorable experiences, which in turn create favorable future behavioral intention and (2) how travelers' residential tourism clusters influence the relationships between tourism-related products and their outcomes as a moderator. By achieving these two research objectives, this study can develop a comprehensive understanding of the effects of destination-related attributes and traveler-related attributes (i.e., residential tourism clusters) on travelers' memorable experience. More specifically, this study also investigates the effects of core products (i.e., tourism resources) and augmented/facilitating products (i.e., smart tourism technologies) of a smart tourism destination on memorable experience and future behavioral intention, and the moderating effect of travelers' residential tourism clusters in the proposed relationships. The findings of this study would provide a deeper understanding of traveler behavior from a theoretical perspective and offer useful insights into smart tourism destinations from a practical perspective.

2. LITERATURE REVIEW

2.1. Theoretical background

As the theoretical background to understand the effects of various tourism products and travelers' residential tourism cluster on memorable tourism experience and future behavioral intention, this study adopted the concept of smart tourism (Buhalis & Amaranggana, 2014), the levels of products (Kotler, 2006), the cluster theory (Porter, 1990), and the social ecological model (Bronfenbrenner, 1979). Specifically, the key characteristics of smart tourism and four attributes of smart tourism technologies were developed based on Buhalis and Amaranggana (2014), and Huang et al. (2017). The various levels of tourism products at smart tourism destinations were based upon Kotler's (2006) product levels. Memorable experience was proposed as consequence of various levels of smart tourism products as travelers seek meaningful experiences (i.e., memorable experience) (Elshaer & Marzouk, 2022) and the primary aim of smart tourism destinations is to enhance stakeholders' experience (Jeong & Shin, 2020). Given the importance of memorable experience, researchers (Azis et al., 2020; Jeong & Shin, 2020; Yang & Zhang, 2022) suggested the significance of memorable experience in smart

tourism destinations. Furthermore, previous studies demonstrated that various tourism products, such as tourism resources (Kim, 2014) and smart tourism technologies (Elshaer & Marzouk, 2022; Torabi et al., 2022) positively influence travelers' memorable tourism experiences. The effects of memorable tourism experience on future behavioral intentions were supported by extent literature (Kim, 2018). Lastly, the moderating effects of travelers' residential tourism clusters were constructed based on the social ecological theory (Bronfenbrenner, 1979). Figure 1 illustrates the proposed research framework, which will be discussed in more detail subsequently.

[Fig. 1]

2.2. Smart tourism destinations and their tourism-related products

Inspired from smart cities, many tourism destinations have endeavored to transform themselves into smart tourism destinations by focusing on operational efficiency and enrichment of tourism experience (Koo & Cantoni, 2019). Smart tourism destinations are defined as tourism destinations that utilize advanced information and communications technologies (ICTs) to create and manage enhanced tourism experience (Gretzel et al., 2015). The ultimate goal of smart tourism destinations lies in increasing destination competitiveness and improving tourism experience through the adoption of smart technologies (Boes et al., 2016). From tourism perspectives, a destination's competitiveness is closely associated with destination attractiveness, which is defined as a combination of benefits that a traveler can obtain from the destination (Andrades-Caldito et al., 2014). Accordingly, for a traveler, a destination's competitiveness is not a single tourism product, but a composite of various tourism-related products (Dwyer et al., 2005; Novais et al., 2016), indicating that the availability of a variety of high-quality tourism products at various products levels is critical to improve a destination's competitiveness (Croes, 2011).

As Crouch (2011) asserted, the competitiveness of various levels of tourism-related products might not have equal weights. Furthermore, previous literature (Andrades-Caldito at al., 2014) divided tourism products into core products and supporting products. While core products play as a pull factor for a destination, supporting products mostly facilitate travelers' experience at the destination. Thus, two different levels of tourism-related products (i.e., core product: tourism resources, non-core product: smart tourism technologies) were selected by considering the different weights of a destination's tourism-related products and theoretical supports. Specifically, smart tourism technologies were further divided into augmented products (interactivity and personalization) and facilitating products (accessibility and informativeness) based on their product characteristics.

Regardless of the smartness of a destination, destination attributes, including different levels of tourism products/services, were identified as key factors affecting travelers' memorable experience. Particularly, among the ten destination attributes affecting memorable tourism experience (Kim, 2014), a notable number of attributes were related to tourism resources (e.g., local culture, quality of service, entertainment, and infrastructure). On the other hand, given that smart tourism destinations implemented smart tourism technologies to enrich travelers' memorable experiences, smart tourism technologies have been shown to have a positive impact on memorable experience and behavioral intentions (e.g., Azis et al., 2020; Elshaer & Marzouk, 2022). The following section will provide further theoretical support for the relationships between the different levels of tourism products and memorable experience.

2.2.1. Tourism resources

The tourism industry is different from other general manufacturing industries in that it does not have ownership, which is well known for its 'intangible' nature of the industry. In the tourism industry, travelers are not just purchasing ownership of a product but gaining an experience that is generated from their interactions with tourism products (Andersson, 2007). Among the various levels of tourism products, physical plants, such as tourism resources, have been considered as the core products (Crouch, 2011; Smith, 1994). Accordingly, a destination's competitiveness is closely associated with the benefits that travelers obtain from their visit to the destination, such as tourism products, attractions, and comforts (Novais et al., 2018). A variety of tourism resources can contribute to the formation of tourism experience (Leiper, 1979). For example, the cultural tourism resources are the fundamental source of travelers' culture tourism experiences.

While natural and/or artificial tourism resources are also vital for tourism experiences, the tourism industry needs to provide adequate inputs that meet its needs to generate travelers' memorable experiences (Andersson, 2007). Particularly, the availability of quality tourism resources is critical since a destination's tourism resources are the key to attract travelers who look for experiences that are not commonly available in their day-to-day life (Cetin & Dincer, 2014; Cohen; 1979). The importance of tourism resources in creating travelers' memorable experiences has, therefore, been much addressed by several scholars (e.g., Tukamushaba et al., 2016). Coelho et al. (2018), found three elements of memorable tourism experience: (1) environment and culture, (2) interpersonal relationships, and (3) individual/psychological factors. They suggested that natural, artificial, and cultural resources are key contributors to travelers' memorable experiences as tourism resources are fundamental elements for enhancing travel experience. Kim (2014) also proposed that travelers' memorable experience is influenced by psychological factor and tourism destination attributes, such as local culture and tourism resources. Thus, the following hypothesis was developed.

H1: The variety and quality of tourism resources positively influence travelers' memorable experiences.

2.2.2. Smart tourism technology's interactivity and personalization

While tourism resources (e.g., attractions) are the basis of creating travelers' experience, the memorability of their experience is dependent on their responses to the resources (Coelho et al., 2018). Thus, products other than the core products (i.e., tourism resources), such as augmented and/or supporting products (e.g., ancillary services), might facilitate travelers' engagement in the destination, thereby generating memorable experiences. As the key competitive edge of smart tourism destinations is their integration of technology with tourism resources, smart tourism destinations have provided more interactive and personalized information to travelers to enhance their experience at the destination (Huang et al., 2017; Jeong & Shin, 2020). Thus, with the interactive and personalized services provided by smart tourism technologies, travelers are becoming more engaged in tourism activities (Huang et al., 2017; Um & Chung, 2021). More specifically, smart tourism technologies' interactive and personalized services would provide information or access to tourism activities that are considered meaningful to each traveler, enhancing the memorability of his/her tourism experience (Buhalis & Amaranggana, 2015; Shin et al., 2021). Furthermore, travelers tend to remember distinctive

events more than ordinary events (Kim et al., 2012). When travelers perceive the highly interactive and personalized smart tourism technologies, which are one of the key characteristics of a smart tourism destination, distinctive from other destinations, they would find their experience memorable. Based on the discussion above, the following hypothesis was developed.

H2: Smart tourism technologies' interactivity and personalization positively influence travelers' memorable experiences.

2.2.3. Smart tourism technology's accessibility and informativeness

Because of the intangibility of the tourism industry, it is difficult for travelers to anticipate their experience until their consumption of travel activities at the destination (Vogt & Fesenmaier, 1998). Accordingly, many travelers often seek more information about tourism products in order to reduce their uncertainty, thereby enriching their travel experiences (Murray, 1991). Thus, travelers' access to smart tourism technologies, which provides information on the destination and tourism resources, would lower their perceived risks associated with their travel experiences, resulting in positive memories of their experience (Jeong & Shin, 2020). Furthermore, small changes in tourism-associated services (e.g., rich information about tourism resources) might affect a traveler's overall tourism experience due to the intangible and highly interrelated components of tourism products. (Albayrak et al., 2010). This makes the experience more enjoyable and memorable when travelers have easy access to smart tourism technologies, which offers credible and trustworthy information about the destination (Jeong & Shin, 2020). Therefore, the following hypothesis was developed.

H3: Smart tourism technologies' accessibility and informativeness positively influence travelers' memorable experiences.

2.3. Memorable experience and future behavioral intention

Memorable experience refers to a consumers' unforgettable experience, which is positively recalled and remembered by him/her (Oh et al., 2007). While quality experience is a significant antecedent of memorable experience (Seyfi et al., 2020), it has been much discussed that creating memorable tourism experience is critical for a destination's sustainability (Wei et al., 2019) because a traveler's memory about a destination is a crucial source of information, which in turn affects their behaviors and decision-making (Sharma & Nayak, 2019). Particularly, experience is critical in the context of tourism since travelers seek something novel during their travel (Cetin, 2020). Researchers asserted the importance of memory in consumer experience in lieu of substantial influence of consumers' memorable experiences on their future behaviors (Sugathan et al., 2019; Wirtz et al., 2003). In the tourism context, memorable experience is even more critical because travelers tend to recall their past experiences when making decisions about destinations (Chen & Rahman, 2018; Kim et al., 2012). Zhang et al. (2018) suggested that the creation of memorable experience would increase the odds of travelers' destination revisit. Several studies have also shown that travelers' memorable experiences are different and are a key predictor of their future behavioral intentions (Kim, 2018; Zhong et al., 2017). Furthermore, in the context of smart tourism, the positive impact of memorable experience on behavioral intention was much confirmed (Azis et al., 2020; Yang & Zhang, 2022). Accordingly, the following hypothesis was developed.

H4: Travelers' memorable experiences at a smart tourism destination positively influence their future behavioral intention.

2.4. Moderating effect of travelers' residential tourism clusters

Porter (1990) proposed a concept of clusters, geographical concentrations of associated organizations in interconnected industries. From a business perspective, an industry cluster is a key contributing factor to the competitive success of a geographical unit (e.g., region) in particular areas of a business, since the business units in a cluster not only compete but also cooperate to create competitive advantages through innovations, such as specialized assets and skills (Porter, 2000). Porter's (1990) cluster theory has been applied in the tourism discipline to measure the effect of tourism on the local community, such as economic development (Cunha & Cunha, 2005) and social capital (Kim & Shim, 2018). Thus, tourism clusters are referred to as the concentration or specialization of tourism industry businesses (Jang & Kim, 2022). Although recent tourism studies have measured the effects of tourism clusters on regional lodging performance (Lee et al., 2020; Peiro-Signes et al., 2015) or economic resilience (Lee et al., 2021), the concept of tourism cluster has rarely been applied to understand traveler behavior despite its potential to further comprehend traveler behavior.

Travelers' residential tourism clusters are the concentration and development of the tourism industry within travelers' residential areas. According to the social ecological model, individuals' perceptions toward an object is strongly affected by micro-, meso, exo-, and macro-systems (Lyons et al., 2019), proposing that the consideration of his/her residential tourism environment, such as residential tourism clusters, is necessary to accurately predict his/her behavior. Accordingly, the effects of travelers' residential tourism clusters are particularly crucial because of the complicated interactions between an individual, other individuals, groups, organizations, and their residential built environment (Golden et al., 2015). Despite its importance, however, there is a lack of research addressing how travelers' residential attributes affect their travel experiences at different destinations.

One of the most important post-experience outcomes is a traveler's memory of the travel experience (Ye et al., 2020). Memory is considered the most crucial factor affecting people's behavioral intention. However, not all service encounters at a destination form memorable experience (Kim et al., 2012). When an individual faces a distinctive or unexpected event, he/she finds it more memorable (Brandt et al., 2006). According to Hockenbury and Hockenbury (2016), consumers tend to perceive objects in a particular way, which is affected by their expectations, and these expectations are developed from the accumulation of various sources, including their previous experience with similar services (Zeithaml et al., 1985). For example, if a consumer has watched comedy movies on a daily basis, he/she might not think watching another comedy movie is memorable. When it comes to the tourism context, travelers living in areas with a high degree of tourism industry concentration will have a certain level of expectations for destination competitiveness (e.g., tourism resources), as they have been repetitively exposed to competitive tourism services in their residence. Accordingly, travelers living in more-clustered tourism industries would not feel their travel experience at a smart tourism destination memorable because of their expectation for destination competitiveness. Furthermore, even if for some reason a traveler perceived a travel experience to be memorable, it may not develop desirable behavioral intentions, if similar experiences can be easily obtained in surrounding areas with highly developed tourism infrastructure. For example, if a traveler from

New York City, NY, U.S., finds a similar level of tourism infrastructure (e.g., the number of restaurants, hotels, and attractions) at the destination, he/she may have a favorable attitude toward the destination, because there would be no negative cognitive dissonance. Therefore, the following hypothesis was developed.

H5: Travelers' residential tourism cluster moderates the proposed relationships.

3. METHODOLOGY

3.1. Data collection and instruments

This study employed a self-administered online survey by working with a database marketing company, Qualtrics. As the study setting, five cities were selected (i.e., Boston, MA; Chicago, IL; New York City, NY; San Francisco, CA; and Seattle, WA) as they were top smart tourism destinations ranked within 15 in the U.S. (Dhiraj, 2017) as well as representing different geographical regions (Northeast, Midwest, and West).

The online survey consisted of four sections, beginning with a consent form and screening questions. More specifically, the first screening question asked the respondents to check all U.S. smart tourism destinations they had traveled to in the previous 12 months. Those who had not traveled to any smart tourism destinations in the past 12 months were directed outside the survey. Those who had visited the five aforementioned smart tourism destinations were randomly assigned to one of the cities for quota. For example, if a respondent answered three smart tourism destinations: New York City, NY, San Francisco, CA, and Seattle, WA, he/she was directed to one of the three destinations for the rest of the survey. As the data were collected before the COVID-19 pandemic, there were no specific travel restrictions during the data collection period. The second section included questions asking the type of smart tourism technologies they had used during their travel to the destination. To help the respondents' clear understanding of smart tourism technologies, actual examples were given to each of the technologies. For example, Greenway and Waze were provided as examples of traffic routing mobile apps. The third section asked items to measure the key constructs of this study. The last section included questions asking the respondents' socio-demographic information.

All measurement items were adopted from existing studies and modified to fit the study context to ensure content validity, reliability, and readability (see Table 2 for measurement items). More specifically, the tourism resources were measured with items based on Crouch (2011), Dwyer, Mellor, Livaic, Edwards, and Kim (2004), and Enright and Newton (2005). Attributes of smart tourism technologies were measured with items from Huang et al. (2017). Items from Oh et al. (2007) were used to measure memorable experience. Future behavioral intention was measured with items adopted from Lin and Hsieh (2007). All constructs were measured with multiple items on a 7-point Likert scale. As this study worked with a database marketing company, the respondents' residence was available via metadata, such as latitude and longitude.

As this study was interested in the respondents' behaviors based on their residential tourism clusters, we measured the degree of tourism cluster by calculating the value of the location quotient (LQ), which refers to a metric for quantifying the relative concentration of the specific industry in a specific area with regards to the entire population (Yang, Kim, Pennington-Gray, & Ash, 2021). Based on previous studies (Lee et al., 2021; Lee et al., 2021), the North American Industry Classification System (NAICS) 71 (arts, entertainment, and recreation: AER)

and 72 (accommodation and food services: AFS) were used to define two types of tourism clusters: LQ71 (AER) and LQ72 (AFS). Both LQ71 and LQ72 indices were calculated by the number of employees in the AER and AFS industries in respondents' residential county compared to the US. average in 2016. As the LQ index of one denotes the national average of the industry, the average values of LQ 71 and LQ 72 were compared to the value of one (i.e., the national average) to categorize the respondents' residential tourism cluster into two groups: more-tourism clustered area and less-tourism clustered area. Fig. 2 shows the spatial distribution of all variables based on respondents' residential location.

[Fig. 2]

3.2. Data analysis

Data analysis included seven steps and was conducted using R 3.6.2 and ArcGIS Pro. First, all respondents' residential areas were identified using geocoding that is the process of transforming a text-based description of a location (e.g., address and geographic coordinates such as latitude and longitude) to a location on the earth's surface (Jang & Kim, 2022). Second, respondents' residential attributes (e.g., types of residential area [urban vs. non-urban], level of tourism clusters) were measured. Third, a descriptive analysis was conducted to summarize the socio-demographic characteristics and residential attributes of the respondents. Fourth, by following a two-step approach (Anderson & Gerbing, 1988), covariance-based structural equation modeling (CB-SEM) was employed to perform the main data analysis. Fifth, the adequacy of the measures was assessed by conducting a series of confirmatory factor analyses (CFA). Sixth, once the measurement model test showed satisfactory results, the proposed hypotheses were tested. Due to the Chi-square's sensitivity (Bollen, 1989), various fit indices were used to evaluate the goodness of the model fit. Lastly, a multi-group analysis was performed to investigate the moderating effect of respondents' residential tourism clusters.

4. RESULTS

4.1. Respondents' profile

Table 1 illustrates the respondents' socio-demographic profile. A total of 1,010 complete responses were collected. About a half (51%) were female. Approximately 58% of the respondents were Millennials, demonstrating the Millennials have become the frontier of the tourism industry. Two-thirds (66%) of the respondents held an associate degree or higher. About three-quarters (75%) of the respondents were Caucasian. More than half (55%) of the respondents were working full-time. Three-fifth (59%) of the respondents had a household income greater than $50,000. About 38% of the respondents visited two or more smart tourism destinations. The most visited smart tourism destination was New York City, NY (31%). About two-thirds (66%) of the respondents answered that their primary purpose of travel was pleasure. Most respondents (96%) mentioned that they used their own smart devices (e.g., smartphones, tablets) while they were traveling smart tourism destinations. Two-thirds (67%) of the respondents were residents of urban areas, and their residence was corresponding to the U.S. population. According to the value of LQ7, about 48% of the respondents lived in the place where the tourism industry is more concentrated (i.e., more-tourism clustered areas).

[Table 1]

4.2. Measurement model test

Fit indices suggested that the overall model fit of the measurement model was satisfactory (CFI = .94, TLI = .93, RMSEA = .07, SRMR = .04) (Newsome, 2012). Standardized factor loading was equal to or greater than .72, proving the error variance was less than the measured variance (Gefen et al., 2000). Each construct's average variance explained (AVE) was equal to or greater than .64, demonstrating the shared variance was greater than the error variance (Fornell & Larcker, 1981), confirming convergent validity. The square root of AVE was greater than the correlation between two constructs, indicating sufficient discriminant validity (Fornell & Larcker, 1981). Both Cronbach's alpha and composite reliability were at least .89, suggesting satisfactory internal consistency (Nunnally & Bernstein, 1978).

[Tables 2 & 3]

4.3. Structural model test

The overall model fit of the structural model was satisfactory (CFI = .93, TLI = .92, RMSEA = .08, SRMR = .06) (Newsome, 2012). The R^2 for memorable experience was .72, showing the different tourism products explained more than two-thirds of the variance in travelers' memorable experiences at the destination. Also, a substantial amount of variance of future behavioral intention was explained by the proposed research framework (R^2: .51). Table 4 illustrates the results of the structural model test. To ensure whether the sample size was sufficient, a post-hoc power analysis was conducted with *semPower* package, and the results showed that the sample size of 1,010 was associated with a power greater than 99%.

As tourism is associated with the travelers' consumption of cultures, experiences embedded in the place (Saraniemi & Kylänen, 2011), a smart destination's tourism resources (e.g., cultural attractions and quality of tourism services) had a significantly positive impact on travelers' memorable experiences ($\beta = .72$, $z = 9.30$, $p < .001$), indicating H1 was supported. When a smart destination lacks tourism resources, it might be difficult for the destination to generate memorable travel experiences to attract them to revisit the destination. With the integration of technology with tourism resources, smart tourism destinations have offered more interactive and personalized information to meet travelers' needs and enhance their travel experience (Jeong & Shin, 2020). The results revealed that smart tourism destinations' effort to provide interactive and customized information positively contributed to travelers' memorable experiences ($\beta = .88$, $z = 9.06$, $p < .001$), supporting H2. It proposed that travelers' experience is more memorable when they received more customized information, further validating that travelers' memorable experiences are selectively constructed based on their own evaluation of their experience (de Freitas Coelho et al., 2018). On the other hand, H3 was rejected, illustrating that smart tourism technologies' accessibility and informativeness had no significant impact on travelers' memorable experiences ($\beta = .09$, $z = 1.24$, $p = .21$). This result suggested that as the study sites were popular smart tourism destinations in the U.S., the travelers might take smart tourism technologies' accessibility and informativeness for granted. The relatively high construct mean value (M = 5.78) further support the possibility of travelers' high expectation for a smart tourism destination in providing higher accessibility and informativeness of smart tourism technologies. As demonstrated in many studies (e.g., Kim, 2014; Kim, 2018), travelers' memorable experiences had a positive direct impact on their future behavioral intention ($\beta = .55$, $z = 17.58$, $p < .001$), showing H4 was supported.

To provide a more rigorous understanding of the relationships among tourism products, memorable experience and intention, mediation analyses were conducted. The results indicated that impacts of tourism resources, and interactivity and personalization on behavioral intention were mediated by travelers' memorable experiences. More specifically, when travelers thought that a smart tourism destination was competitive in their tourism resources, their experience was more memorable, which in turn increases their future behavioral intention (β = .39, z = 9.03, p < .001). In the same vein, the higher smart tourism technologies' interactivity and personalization were, the more memorable travelers' experience at the smart tourism destination was, thereby escalating their future behavioral intention (β = .48, z = 8.87, p < .001). Due to the insignificant impact of the accessibility and informativeness attributes of smart tourism technologies on memorable experience, the assumptions for mediation analysis were not met, indicating the indirect effect of the accessibility and informativeness on future behavioral intention was not found (β = .05, z = 1.24, p = .22).

As hypothesized (H5), the moderating effect of travelers' residential tourism clusters was tested, using multi-group analysis (MGA). The results indicated that there were significant differences between residents living in more-tourism clustered area and those in less-tourism clustered area in all hypothesized relationships (see Table 5). First of all, tourism resources had a positive impact on travelers from both more-tourism clustered (β = .58, z = 5.75, p < .001) and less-tourism clustered (β = .88, z = 6.95, p < .001). In particular, the results revealed that the positive impact of tourism resources on travelers' memorable experiences was significantly higher for travelers who lived in less-clustered areas ($Diff_{L\text{-}M}$ = .30, z = 40.43, p < .001). As those in the less-tourism clustered areas had less access to the tourism and hospitality industry, they were more likely to have a memorable travel experience in a smart tourism destination where a high quality of tourism resources was available for travelers.

While the impact of smart tourism technologies' interactivity and personalization was positive for both groups, it was stronger for those from less-tourism clustered areas ($Diff_{L\text{-}M}$ = .25, z = 26.88, p < .001) than more-tourism clustered areas. It might be explained that travelers from less-tourism clustered areas were able to get more interactive and personalized services through smart tourism technologies to explore the smart tourism destination, the tailored tour information from smart tourism technologies might generate more memories related to their travel experience, which they rarely had in their residential areas. For example, when smart tourism technologies recommended a popular restaurant chain for travelers based on their needs, they might find the restaurant very unique and memorable since they cannot access the restaurant chain in their areas of residence. Thus, travelers' memorability of their experience would be different if one traveler lived in an area where he/she cannot find the restaurant, and the other one can easily access the restaurant whenever he/she wants because he/she lived in an area of which specialization is the hospitality industry.

Interestingly, smart tourism technologies' accessibility and informativeness had a positive impact on travelers' memorable experiences only when they were from more-tourism clustered areas (β = .33, z = 2.92, p =.003). Whereas smart tourism technologies' accessibility and informativeness did not influence travelers' memorable experiences if they were from less-tourism clustered areas (β = -.02, z = -.17, p = .87). This difference ($Diff_{L\text{-}M}$ = -.35, z = -49.66, p < .001) might be attributed by the travelers' different levels of exposure to smart tourism technologies. Travelers from more-tourism clustered areas might have more experience with smart tourism technologies in their daily lives, as most of smart tourism technologies have been offered in mobile app. For example, those who live in more-tourism clustered areas would use

Yelp on a daily basis, as it provides useful information about restaurants and easily accessible using their smartphones. As they are familiar with those smart tourism technologies, they might find smart tourism technologies more accessible and useful while they were traveling.

On the other hand, those who live in a less-tourism clustered area might not use Yelp frequently due to the lack of options (e.g., a limited number of restaurants nearby). Accordingly, travelers from less-tourism clustered areas would not find smart tourism technologies easily accessible or useful, as they are not familiar with using those smart tourism technologies. The impact of memorable experience on travelers' future behavioral intention was significantly positive for both groups but stronger for travelers from more-tourism clustered areas ($Diff_{L\text{-}M}$ = -.02, z = -7.29, p < .001). The mediating effects of memorable experience in the relationships between tourism resources ($Diff_{L\text{-}M}$ = .15, z = 35.93, p < .001) and smart tourism technologies' interactivity/personalization ($Diff_{L\text{-}M}$ = -.12, z = 22.90, p < .001), and future behavioral intention was higher for travelers from less-tourism clustered areas. On the other hand, the mediating effect of memorable experience was stronger for travelers from more-tourism clustered areas ($Diff_{L\text{-}M}$ = -.19, z = -50.33, p < .001) than those from less-tourism clustered areas.

[Tables 4, 5, & 6]

5. DISCUSSION AND CONCLUSION

As the concept of smart tourism has received a lot of attention from tourist destinations and researchers, many studies have been conducted to understand how the attributes of smart tourism technologies affect travelers' memorable experiences and future behavioral intentions. However, despite the fact that different levels of tourism products (e.g., core, augmented, supporting products) are interrelated, the impact of tourism products has commonly been investigated on their own rather than trying to understand the synergies of different tourism products together. Thus, this study sought to examine how different levels of tourism products affect travelers' memorable experiences, leading to future behavioral intention. Moreover, instead of only investigating the effect of tourism products on travelers' memorable experiences, the impact of travelers' backgrounds on memorable experiences was also examined. Particularly, by adopting the social ecological model (Bronfenbrenner, 1979) and Porter's (1990) cluster theory, this study attempted to provide a comprehensive understanding of how travelers' residential tourism clusters influenced their travel experience in conjunction with different levels of tourism products.

5.1. Theoretical implications

This study offers several theoretical contributions. First of all, the findings of this study further confirmed that various tourism resources are the key contributor to tourism experience. In other words, as the core product of the industry, tourism resources have been the fundamental source of travelers' memorable experiences even though the destinations are not heritage or cultural tourism destinations. This study also provides empirical support to previous studies (e.g., Azis et al., 2020; Elshaer & Marzouk; Jeong & Shin, 2020) suggesting that smart tourism technologies are a type of tourism products that further enhance travelers' memorable experiences. Particularly, the findings indicate that smart tourism technologies' interactivity and personalization, as an augmented product, offer tourism services that are considered more meaningful to each traveler, thereby creating memorable experience. On the other hand, the

results also reveal that some attributes of smart tourism technologies (i.e., accessibility and informativeness) might not have a significant impact on travelers' memorable experiences, suggesting different weights of attributes of smart tourism technologies in creating memorable experience. Specifically, this study shows that smart tourism technologies' accessibility and informativeness had an insignificant impact on memorable experience; nevertheless, travelers' perceived performance of these two attributes were high, suggesting travelers' high expectations or indifference toward smart tourism technologies' accessibility and informativeness. Thus, this study raises the potential to apply the two-factor theory in the context of smart tourism technologies.

Second, this study examined travelers' memorable experiences at a smart tourism destination based on only by tourism products, mitigating individual travelers' subjective evaluation. Specifically, compared to other antecedents of memorable experience (e.g., meaningfulness, novelty), the evaluation of tourism products (i.e., tourism resources, smart tourism technologies) can be more objective since they can be measured in quantity, such as the number of tourism resources or attractions available at the destination, the percentage of public transportation equipped with smart technologies) (OECD, 2020). Hence, the findings further demonstrated how objective stimulus (i.e., tourism products) can enhance travelers' memorable experiences, thereby leading to behavioral responses. Furthermore, the positive impact of tourism resources on travelers' memorable experience provides additional support to previous studies that investigated the antecedents of memorable tourism experience (e.g., Kim, 2014; Tukamushaba et al., 2016).

Most importantly, the finding of this study also showed a significant difference between travelers from more-tourism clustered areas and those from less-tourism clustered areas. Although many studies investigated the factors affecting travelers' memorable experience in the context of smart tourism, it remained unclear how travelers' residential tourism clusters affect the relationships between the memorable experience and its antecedents. By assessing the moderating role of travelers' residential tourism clusters in the relationship between various levels of tourism products, memorable experience, and behavioral intention, this study extends the theoretical boundary of the social ecological theory to the tourism context. Specifically, the moderating effect of travelers' residential tourism clusters based on LQ indices suggested the importance of a travelers' residential tourism cluster in shaping their expectations/standards of tourism products, such as tourism resources and smart tourism technologies. These results further reinforce the existing literature that consumer expectations evolve according to their surrounding situations, and they tend to behave in a particular way, which was established by their expectations (Hockenbury & Hockenbury, 2016).

By detecting the significant impact of travelers' residential built environment, such as residential tourism clusters, this study proposes that geographic segmentation for travelers can be more comprehensive by considering the residential environment of travelers. As the substantial difference between the two groups showed, the impacts of tourism products (i.e., tourism resources, smart tourism technologies) were much stronger for travelers from less-tourism clustered areas. Thus, these results further validated previous research by confirming that memorable experience occurs when travelers encounter distinctive services from their routine or day-to-day life. Furthermore, the positive impact of smart tourism technologies' accessibility and informativeness only for travelers from more-clustered areas suggested that travelers' familiarity with smart tourism technologies might help create memorable experience. Lastly, the findings of

the study reconfirmed that travelers' memorable experience was a key predictor of their future behavioral intentions.

5.2. Practical implications

The findings of this study would be valuable to smart tourism destination management. First, this study found significant impacts of tourism resources and smart tourism technologies' interactivity and personalization on memorable experience and behavioral intention, regardless of travelers' residential tourism clusters. Thus, smart tourism destinations are recommended to allocate more resources to the development of interactive and personalized smart tourism technologies in order to enhance travelers' memorable experiences. In addition, the findings of this study also provide practical insights into tourism destinations that plan to transform into smart tourism destinations. Specifically, given the limited budget for smart tourism, destinations rich in tourism resources are encouraged to implement more interactive and personalized smart tourism technologies than to increase the accessibility and informativeness of smart tourism technologies. For instance, a mobile travel guide app for a tourism destination could set up algorithms to personalize its own information based on travelers' preference and characteristics, rather than listing all information accessible by the general public. However, even though the results indicated that accessibility and informativeness of smart tourism technologies had an insignificant impact on memorable experience, it should be noted that travelers might consider accessibility and informativeness as basic characteristics of smart tourism technologies. Accordingly, if budget permits, it should be remembered that DMOs must have a certain level of accessibility and informativeness of smart tourism technologies.

The results revealed that there is a significant difference between travelers from more-tourism clustered areas and those from less-tourism clustered areas, highlighting the importance of travelers' residential tourism cluster in memorable tourism experience. Particularly, the impacts of tourism resources and smart tourism technologies' interactivity and personalization were much stronger for travelers from less-tourism clustered areas. The significant moderating effect of travelers' residential tourism cluster reminds DMOs that it is important to understand the characteristics of their main tourist-generating regions. Specifically, tourism destinations, where visitors mainly come from less-tourism clustered areas, might need to pay special attention to enhance memorability of travel experience. Smart tourism destinations are encouraged to identify the tourism industry concentration of visitors in order to develop appropriate marketing plans. For example, the positive impact of smart tourism technologies' accessibility and informativeness on memorable experience was only significant for travelers from more-tourism clustered areas. If a destination has a large portion of visitors from more-tourism clustered areas, the destination might want to focus on smart tourism technologies' accessibility and informativeness. San Francisco, CA, for instance, might want to enhance the accessibility and informativeness of smart tourism technologies by further utilizing IoTs to provide real-time information to travelers. On the other hand, if many visitors are from less-tourism clustered areas, the destination might not invest further in smart tourism technologies' accessibility and informativeness. Rather, such destinations as New Orleans, LA, might want to add more interactive and personalized features to their smart tourism technologies to enhance travelers' memorable experience.

5.3. Limitations

While the findings of this study provide both theoretical and practical contributions, there are also several limitations to be noted. This study used an objective measure of the tourism industry concentration of travelers' residence, which were LQ indices. In other words, the travelers' perceived concentration of tourism infrastructure of their residence was not considered. Accordingly, this study might not fully reflect travelers' subjective perception toward their residence in terms of tourism infrastructure, whereas their evaluation of smart tourism destination competitiveness was subjective. Future studies are recommended to include travelers' subjective evaluation of their residence in terms of tourism infrastructure to address the gap between objective and subjective evaluations.

While this study investigated the effects of smart tourism technology attributes on travelers' memorable experience as well as their residential tourism clusters, travelers' personal traits, such as technology usage frequency, were not considered. Future studies are highly encouraged to incorporate travelers' smart tourism technology usage patterns to further understand how different destination competitiveness components affect travelers' memorable experiences and behavioral intentions. Furthermore, the inclusion of potential confounding factors (e.g., destination attachment) would be valuable to provide an in-depth understanding of traveler behaviors.

This study investigated the impact of memorable travel experience on their future behavioral intention, including their intention to revisit and recommend to others. As this study examined the overall behavioral intention rather than distinguishing different types of behavioral intention, future studies are encouraged to measure specific types of behavioral intentions separately and explore whether the effect of memorable experience would differ by the types of behavioral intentions and their residence. For instance, travelers who reside far from the smart tourism destinations would have a stronger intention to recommend the destination to others rather than revisiting there due to the geographical limitation.

6. REFERENCES

Albayrak, T., Caber, M., & Aksoy, S. (2010). Relationships of the Tangible and Intangible Elements of Tourism Products with Overall Customer Satisfaction. *International Journal of Trade, Economics and Finance*, *1*(2), 140.

Andersson, T. D. (2007). The tourist in the experience economy. *Scandinavian Journal of Hospitality and Tourism*, *7*(1), 46-58.

Andrades-Caldito, L., Sánchez-Rivero, M., & Pulido-Fernández, J. I. (2014). Tourism destination competitiveness from a demand point of view: An empirical analysis for Andalusia. *Tourism Analysis*, *19*(4), 425-440.

Azis, N., Amin, M., Chan, S., & Aprilia, C. (2020). How smart tourism technologies affect tourist destination loyalty. *Journal of Hospitality and Tourism Technology*, *11*(4), 603-625.

Azis, N., Muslim, A., Chan, S., & Aprilia, C. (2020). How smart tourism technologies affect tourist destination loyalty. *Journal of Hospitality and Tourism Technology*, *11*(4), 603-625.

Balakrishnan, J., Dwivedi, Y. K., Malik, F. T., & Baabdullah, A. M. (2021). Role of smart tourism technology in heritage tourism development. *Journal of Sustainable Tourism*, 1-20.

Boes, K., Buhalis, D., & Inversini, A. (2016). Smart tourism destinations: ecosystems for tourism destination competitiveness. *International Journal of Tourism Cities*, *2*(2), 108-124.

Brandt, K. R., Gardiner, J. M., & Macrae, C. N. (2006). The distinctiveness effect in forenames: The role of subjective experiences and recognition memory. *British Journal of Psychology*, *97*(2), 269-280.

Bronfenbrenner, U. (1979). Contexts of child rearing: Problems and prospects. *American psychologist*, *34*(10), 844.

Buhalis, D., & Amaranggana, A. (2014). Smart tourism destinations. In *Information and communication technologies in tourism 2014* (pp. 553-564). Springer, Cham.

Byrd, E. T., Canziani, B., Hsieh, Y. C. J., Debbage, K., & Sonmez, S. (2016). Wine tourism: Motivating visitors through core and supplementary services. *Tourism Management*, *52*, 19-29.

Cetin, G. (2020). Experience vs quality: predicting satisfaction and loyalty in services. *The Service Industries Journal*, *40*(15-16), 1167-1182.

Cetin, G., & Dincer, F. I. (2014). Influence of customer experience on loyalty and word-of-mouth in hospitality operations. *Anatolia*, *25*(2), 181-194.

Chen, H., & Rahman, I. (2018). Cultural tourism: An analysis of engagement, cultural contact, memorable tourism experience and destination loyalty. *Tourism Management Perspectives*, *26*, 153-163.

Cohen, E. (1979). A phenomenology of tourist experiences. *Sociology*, *13*(2), 179-201.

Croes, R. (2011). Measuring and explaining competitiveness in the context of small island destinations. *Journal of Travel Research*, *50*(4), 431-442.

Crouch, G. I. (2011). Destination competitiveness: An analysis of determinant attributes. *Journal of Travel Research*, *50*(1), 27-45.

Cunha, S. K. D., & Cunha, J. C. D. (2005). Tourism cluster competitiveness and sustainability: proposal for a systemic model to measure the impact of tourism on local development. *BAR-Brazilian Administration Review*, *2*(2), 47-62.

de Freitas Coelho, M., de Sevilha Gosling, M., & de Almeida, A. S. A. (2018). Tourism experiences: Core processes of memorable trips. *Journal of Hospitality and Tourism Management*, *37*, 11-22.

Duan, B., Arcodia, C., Ma, E., & Hsiao, A. (2018). Understanding wine tourism in China using an integrated product-level and experience economy framework. *Asia Pacific Journal of Tourism Research*, *23*(10), 949-960.

Dwyer, L., Mellor, R., Livaic, Z., Edwards, D., & Kim, C. (2004). Attributes of destination competitiveness: A factor analysis. *Tourism Analysis*, *9*(1-2), 91-101.

Elshaer, A. M., & Marzouk, A. M. (2022). Memorable tourist experiences: the role of smart tourism technologies and hotel innovations. *Tourism Recreation Research*, 1-13.

Enright, M. J., & Newton, J. (2005). Determinants of tourism destination competitiveness in Asia Pacific: Comprehensiveness and universality. *Journal of Travel Research*, *43*(4), 339-350.

Golden, S. D., McLeroy, K. R., Green, L. W., Earp, J. A. L., & Lieberman, L. D. (2015). Upending the Social Ecological Model to Guide Health Promotion Efforts Toward Policy and Environmental Change. *Health Education & Behavior*, *42*(1).

Gretzel, U., Werthner, H., Koo, C., & Lamsfus, C. (2015). Conceptual foundations for understanding smart tourism ecosystems. *Computers in Human Behavior*, *50*, 558-563.

Hockenbury, D. H., & Hockenbury, S. E. (2010). *Discovering psychology*. Macmillan.

Huang, C. D., Goo, J., Nam, K., & Yoo, C. W. (2017). Smart tourism technologies in travel planning: The role of exploration and exploitation. *Information & Management*, *54*(6), 757-770.

Hwang, J., & Lee, K. W. (2018). The antecedents and consequences of golf tournament spectators' memorable brand experiences. *Journal of Destination Marketing & Management*, *9*, 1-11.

Jang, S., & Kim, J. (2022). Enhancing exercise visitors' behavior engagement through gamified experiences: A spatial approach. *Tourism Management, 93*, 104576.

Jang, S., & Kim, J. (2022). Remedying Airbnb COVID-19 disruption through tourism clusters and community resilience. *Journal of Business Research, 139*, 529-542.

Jeong, M., & Shin, H. H. (2020). Tourists' experiences with smart tourism technology at smart destinations and their behavior intentions. *Journal of Travel Research*, *59*(8), 1464-1477.

Kim, J. H. (2014). The antecedents of memorable tourism experiences: The development of a scale to measure the destination attributes associated with memorable experiences. *Tourism Management*, *44*, 34-45.

Kim, J. H. (2018). The impact of memorable tourism experiences on loyalty behaviors: The mediating effects of destination image and satisfaction. *Journal of Travel Research*, *57*(7), 856-870.

Kim, J. H., Ritchie, J. B., & McCormick, B. (2012). Development of a scale to measure memorable tourism experiences. *Journal of Travel Research*, *51*(1), 12-25.

Kim, N., & Shim, C. (2018). Social capital, knowledge sharing and innovation of small-and medium-sized enterprises in a tourism cluster. *International Journal of Contemporary Hospitality Management*, *30*(6), 2417-2437.

Koo, C., & Cantoni, L. (2019). Special issue on informatics/data analytics in smart tourism. *Information Processing and Management, 56,* 1373-1375.

Kotler, P. (2006). Principles of marketing. Frenchs Forest, NSW: Prentice Hall.

Lee, H., Lee, J., Chung, N., & Koo, C. (2018). Tourists' happiness: are there smart tourism technology effects?. *Asia Pacific Journal of Tourism Research*, *23*(5), 486-501.
Lee, Y. J. A., Jang, S., & Kim, J. (2020). Tourism clusters and peer-to-peer accommodation. *Annals of Tourism Research*, *83*, 102960.
Lee, Y. J. A., Kim, J., & Jang, S. (2021). Intertemporal tourism clusters and community resilience. *The Professional Geographer, 73*(3), 567-572.
Lee, Y. J. A., Kim, J., Jang, S., Ash, K., & Yang, E. (2021). Tourism and economic resilience. *Annals of Tourism Research*, *87*, 103024.
Leiper, N. (1979). The framework of tourism: Towards a definition of tourism, tourist, and the tourist industry. *Annals of Tourism Research*, *6*(4), 390-407.
Li, Y., Hu, C., Huang, C., & Duan, L. (2017). The concept of smart tourism in the context of tourism information services. *Tourism Management*, *58*, 293-300.
Lyons, S. T., Schweitzer, L., Urick, M. J., & Kuron, L. (2019). A dynamic social-ecological model of generational identity in the workplace. *Journal of Intergenerational Relationships*, *17*(1), 1-24.
Mehraliyev, F., Chan, I. C. C., Choi, Y., Koseoglu, M. A., & Law, R. (2020). A state-of-the-art review of smart tourism research. *Journal of Travel & Tourism Marketing*, *37*(1), 78-91.
Murray, K. B. (1991). A test of services marketing theory: consumer information acquisition activities. *Journal of Marketing*, *55*(1), 10-25.
Novais, M. A., Ruhanen, L., & Arcodia, C. (2016). Destination competitiveness: what we know, what we know but shouldn't and what we don't know but should. *Current Issues in Tourism*, *19*(6), 492-512.
Novais, M. A., Ruhanen, L., & Arcodia, C. (2018). Destination competitiveness: A phenomenographic study. *Tourism Management*, *64*, 324-334.
OECD (2020, December 3). Measuring smart cities' performance: Do smart cities benefit everyone? Retrieved November 4, 2021, from https://www.oecd.org/cfe/cities/Smart-cities-measurement-framework-scoping.pdf
Oh, H., Fiore, A. M., & Jeoung, M. (2007). Measuring experience economy concepts: Tourism applications. *Journal of Travel Research*, *46*(2), 119-132.
Pai, C. K., Liu, Y., Kang, S., & Dai, A. (2020). The role of perceived smart tourism technology experience for tourist satisfaction, happiness and revisit intention. *Sustainability*, *12*(16), 6592.
Peiro-Signes, A., Segarra-Oria, M. D. V., Miret-Pastor, L., & Verman, R. (2015). The effect of tourism clusters on US hotel performance. *Cornell Hospitality Quarterly, 56*(2), 155-167.
Porter, M. E. (1990). The competitive advantage of nations. *Harvard Business Review*, 73-91.
Porter, M. E. (2000). Location, competition, and economic development: Local clusters in a global economy. *Economic Development Quarterly*, *14*(1), 15-34.
Saraniemi, S., & Kylänen, M. (2011). Problematizing the concept of tourism destination: An analysis of different theoretical approaches. *Journal of Travel Research*, *50*(2), 133-143.
Sharma, P., & Nayak, J. K. (2019). Understanding memorable tourism experiences as the determinants of tourists' behaviour. *International Journal of Tourism Research*, *21*(4), 504-518.
Shin, H.H., Jeong, M., & Cho, M. H. (2021). The impact of smart tourism technology and domestic travelers' technology readiness on their satisfaction and behavioral intention: A c ross-country comparison. *International Journal of Tourism Research*, *23*(5), 726-742.
Smith, S. L. (1994). The tourism product. *Annals of Tourism Research*, *21*(3), 582-595.

Stamboulis, Y., & Skayannis, P. (2003). Innovation strategies and technology for experience-based tourism. *Tourism Management*, *24*(1), 35-43.

Sugathan, P., & Ranjan, K. R. (2019). Co-creating the tourism experience. *Journal of Business Research*, *100*, 207-217.

Tang, W., Mokhtarian, P. L., & Handy, S. L. (2011). The impact of the residential built environment on work at home adoption and frequency: An example from Northern California. *Journal of Transport and Land Use*, *4*(3), 3-22.

Torabi, Z. A., Shalbafian, A. A., Allam, Z., Ghaderi, Z., Murgante, B., & Khavarian-Garmsir, A. R. (2022). Enhancing Memorable Experiences, Tourist Satisfaction, and Revisit Intention through Smart Tourism Technologies. *Sustainability*, *14*(5), 2721.

Tukamushaba, E., Xiao, H., & Ladkin, A. (2016). The effect of tourists' perceptions of a tourism product on memorable travel experience: Implications for destination branding. *European Journal of Tourism, Hospitality and Recreation*, *7*(1), 2-12.

Um, T., & Chung, N. (2021). Does smart tourism technology matter? Lessons from three smart tourism cities in South Korea. *Asia Pacific Journal of Tourism Research*, 1-19.

Vogt, C. A., & Fesenmaier, D. R. (1998). Expanding the functional information search model. *Annals of Tourism Research*, *25*(3), 551-578.

Wei, C., Zhao, W., Zhang, C., & Huang, K. (2019). Psychological factors affecting memorable tourism experiences. *Asia Pacific Journal of Tourism Research*, *24*(7), 619-632.

Wirtz, D., Kruger, J., Scollon, C. N., & Diener, E. (2003). What to do on spring break? The role of predicted, on-line, and remembered experience in future choice. *Psychological Science*, *14*(5), 520-524.

Yang, E., Kim, J., Pennington-Gray, L., & Ash, K. (2021). Does tourism matter in measuring community resilience? *Annals of Tourism Research, 89*, 103222.

Yang, X., & Zhang, L. (2022). Smart tourism technologies towards memorable experiences for museum visitors. *Tourism Review*, (ahead-of-print).

Ye, S., Wei, W., Wen, J., Ying, T., & Tan, X. (2020). Creating Memorable Experience in Rural Tourism: A Comparison between Domestic and Outbound Tourists. *Journal of Travel Research*, 0047287520951641.

Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1985). Problems and strategies in services marketing. *Journal of Marketing*, *49*(2), 33-46.

Zhang, H., Wu, Y., & Buhalis, D. (2018). A model of perceived image, memorable tourism experiences and revisit intention. *Journal of Destination Marketing & Management*, *8*, 326-336.

Zhong, Y. Y. S., Busser, J., & Baloglu, S. (2017). A model of memorable tourism experience: The effects on satisfaction, affective commitment, and storytelling. *Tourism Analysis*, *22*(2), 201-217.

FIGURES

Fig. 1. Research framework.

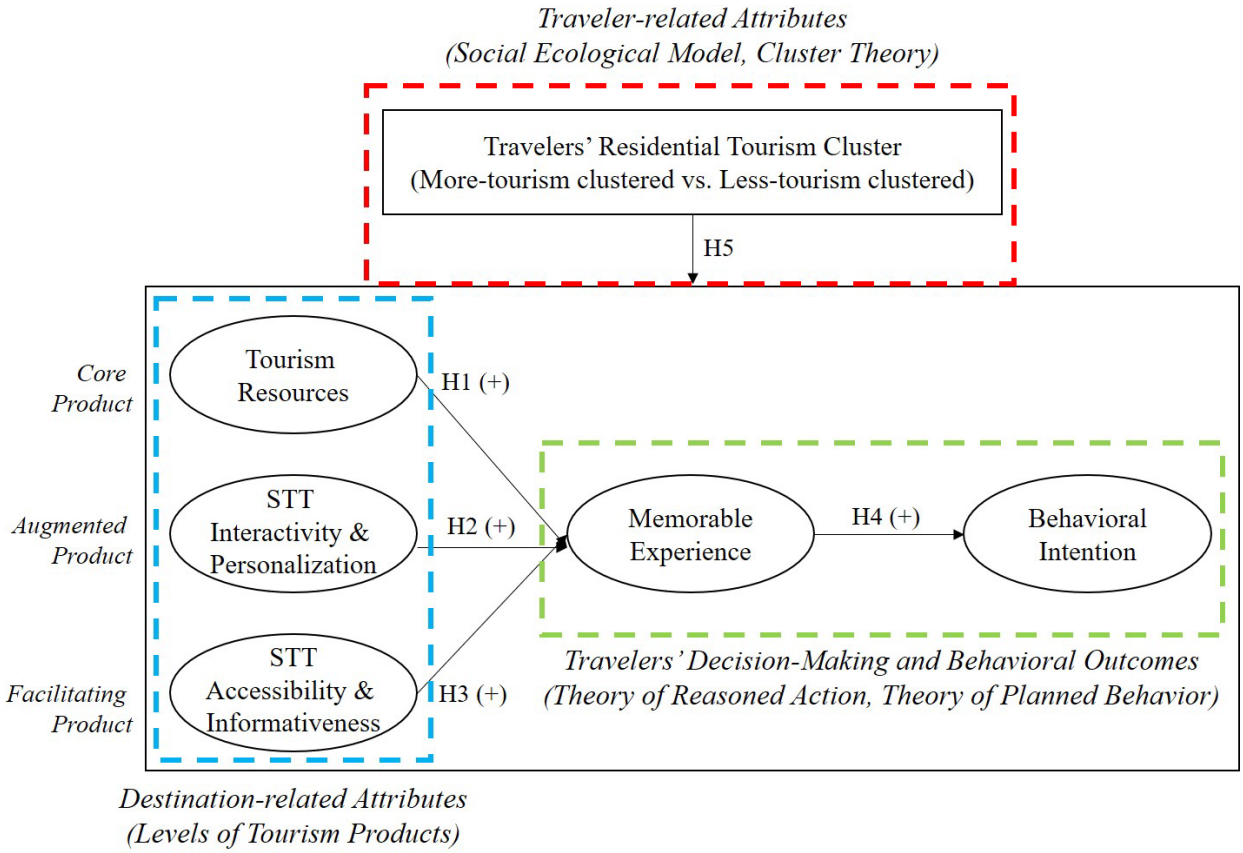

Fig. 2. Spatial distribution of variables.

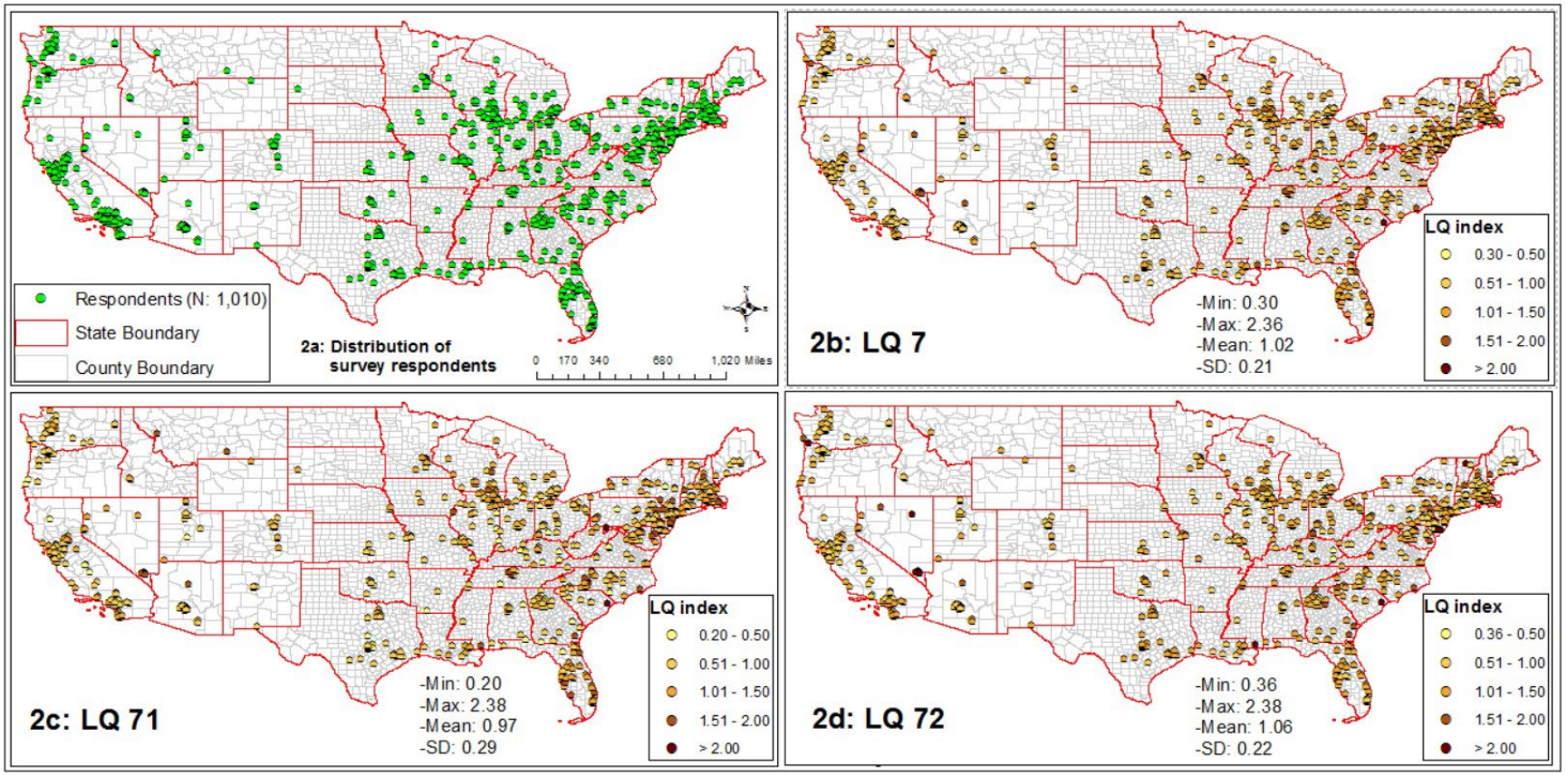

Fig. 2. Spatial distribution of variables (cont.)

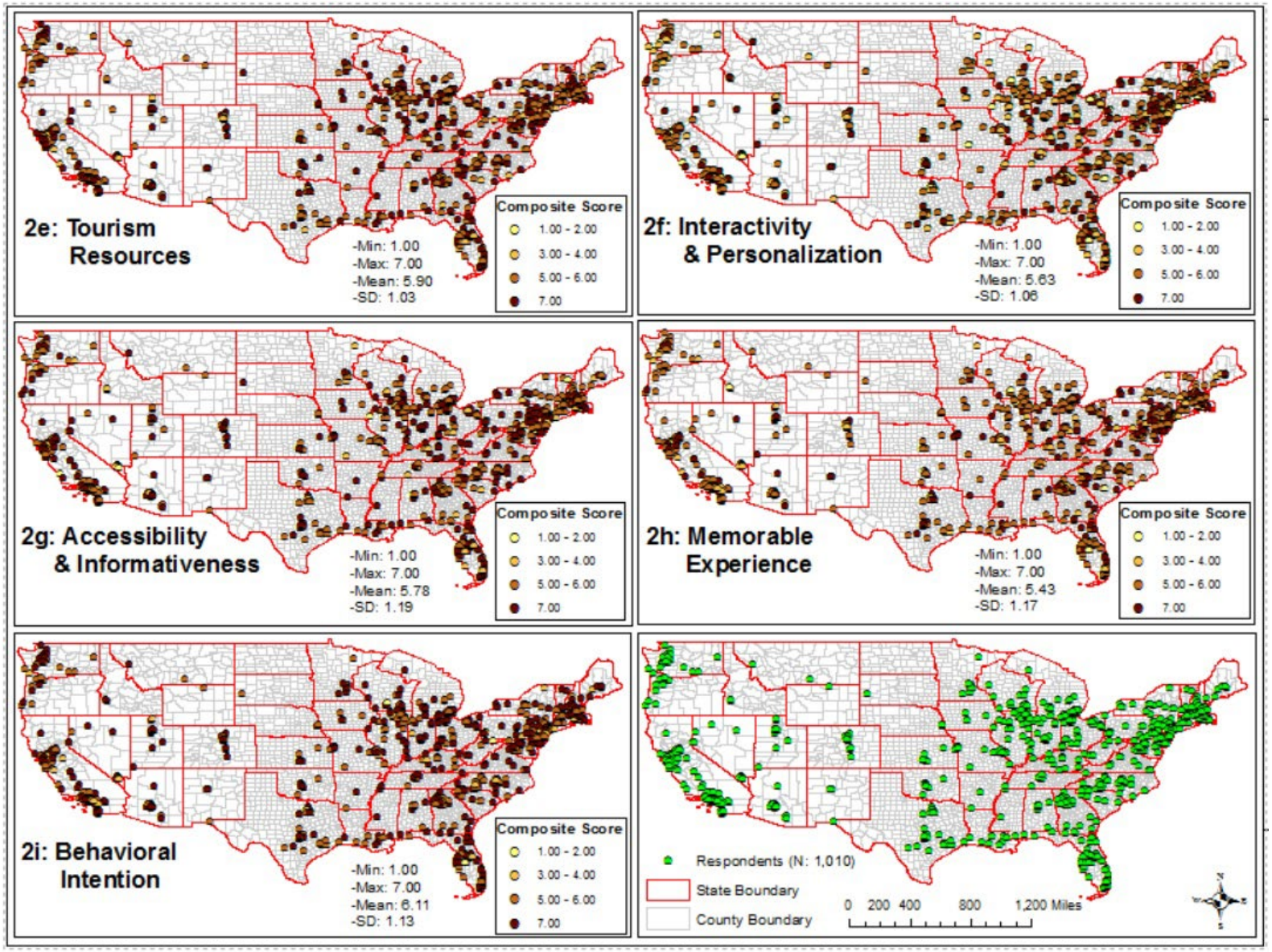

Table 1

Respondents' profile.

Demographic Profile (N = 1,010)	N	%
Gender		
Male	500	49.5%
Female	510	50.5%
Generation		
Baby Boomers	129	12.8%
Generation X	175	17.3%
Generation Y	590	58.4%
Generation Z	116	11.5%
Ethnicity		
Caucasian	752	74.5%
African American	126	12.5%
Asian	77	7.6%
American Indian or Alaska Native	18	1.8%
Native Hawaiian or Pacific Islander	13	1.3%
Other	24	2.4%
Education Level		
High school graduate	346	34.3%
Associate degree	225	22.3%
Bachelor's degree	323	32.0%
Postgraduate Degree	116	11.5%
Employment Status		
Employed full time	552	54.7%
Unemployed	166	16.4%
Employed part time	140	13.9%
Retired	82	8.1%
Self-employed or business owner	70	6.9%
Household Income		
Less than $50,000	414	41.0%
$50,001 to $70,000	181	17.9%
$70,001 to $90,000	142	14.1%
$90,001 to $110,000	111	11.0%
$110,001 to $130,000	66	6.5%
$130,001 to $150,000	29	2.9%
More than $150,000	67	6.6%
Smart Tourism Destination Visited		
Boston, MA	209	20.7%
Chicago, IL	196	19.4%
New York City, NY	225	22.3%
San Francisco, CA	208	20.6%

Seattle, WA	172	17.0%
Purpose		
For business	83	8.2%
For pleasure	670	66.3%
For both business and Pleasure	240	23.8%
Other	17	1.7%
Place of Residence		
Urban	674	66.7%
Non-urban	281	27.8%
LQ7 (Tourism)		
Less-tourism clustered	481	47.6%
More-tourism clustered	474	46.9%
LQ71 (Arts, entertainment, and recreation: AER)		
Less-AER clustered	397	39.3%
More-AER clustered	558	55.2%
LQ72 (Accommodation and food services: AFS)		
Less-AFS clustered	550	54.5%
More-AFS clustered	405	40.1%

Table 2

Constructive descriptive statistics.

Item	Mean	Std	FL	CR	AVE
Tourism Products					
Tourism Resources (Adopted from Crouch (2011), Dwyer et al., (2004), and Enright & Newton (2005))				0.90	0.64
[Selected City] offers varied cultural attractions.	6.01	1.16	0.79		
[Selected City] offers exciting nightlife and entertainment.	5.93	1.24	0.80		
[Selected City] stands for exciting experiences.	5.79	1.28	0.82		
[Selected City] stands for high quality tourism services.	5.74	1.27	0.83		
The quality of accommodations in [Selected City] is good.	5.91	1.17	0.77		
Smart Tourism Technology Interactivity & Personalization (Adopted from Huang et al. (2017))				0.92	0.65
Many other users' questions, answers, and reviews were available on my smart technology applications.	5.48	1.31	0.79		
Smart technology applications were highly responsive to users.	5.65	1.20	0.80		
It was easy to share local information through smart technology applications.	5.65	1.28	0.83		
Smart technology applications allowed me to receive tailored information.	5.60	1.29	0.80		
I could interact with smart technology applications to get personalized information.	5.64	1.22	0.81		
The personalized information provided by smart technology applications met my need.	5.78	1.25	0.83		
Smart Tourism Technology Accessibility & Informativeness (Adopted from Huang et al. (2017))				0.93	0.68
I used smart technology applications anytime and anywhere in [Selected City].	5.58	1.56	0.79		
Smart technology applications were easily available to use in [Selected City].	5.75	1.43	0.86		
In [Selected City], smart technology applications were easily accessible.	5.80	1.37	0.85		
Smart technology applications provided useful information of [Selected City].	5.86	1.33	0.82		
Smart technology applications assisted me in touring at [Selected City].	5.82	1.34	0.83		
Use of smart technology applications in [Selected City] completed my trip successfully.	5.85	1.29	0.79		
Memorable Experience (Adopted from Oh et al. (2007))				0.89	0.67
I had wonderful memories using smart technology applications in [Selected City] during my trip.	5.37	1.40	0.85		
Smart technology applications made my trip enjoyable in [Selected City].	5.54	1.28	0.88		
Smart technology applications made my trip beneficial in [Selected City].	5.59	1.24	0.85		
My experience with using smart technology applications was unforgettable.	5.23	1.45	0.72		
Behavioral Intention (Adopted from Lin & Hsieh (2007))				0.92	0.79

I want to visit [Selected City] again.	6.15	1.23	0.86
I will recommend [Selected City] to family and friends.	6.09	1.22	0.92
I would say positive things about [Selected City] to other people.	6.09	1.21	0.89

Table 3

Discriminant validity.

	Tourism Resources	Interactivity & Personalization	Accessibility & Informativeness	Memorable Experience	Behavioral Intention
Tourism Resources	0.80				
Interactivity & Personalization	0.77	0.81			
Accessibility & Informativeness	0.69	0.80	0.82		
Memorable Experience	0.74	0.80	0.67	0.82	
Behavioral Intention	0.80	0.63	0.58	0.67	0.89

Table 4

Hypotheses testing.

Hypothesis	*est*	*se*	*z*	*p*	Result
Direct					
Tourism Resources → Memorable Experience	0.72	0.08	9.30	< 0.001	Supported
Interactivity & Personalization → Memorable Experience	0.88	0.10	9.06	< 0.001	Supported
Accessibility & Informativeness → Memorable Experience	0.09	0.08	1.24	0.214	Not Supported
Memorable Experience → Behavioral Intention	0.55	0.03	17.58	< 0.001	Supported
Indirect					
Tourism Resources → Memorable Experience → Behavioral Intention	0.39	0.04	9.03	< 0.001	Supported
Interactivity & Personalization → Memorable Experience → Behavioral Intention	0.48	0.05	8.87	< 0.001	Supported

Accessibility & Informativeness → Memorable Experience → Behavioral Intention	0.05	0.04	1.24	0.216	Not Supported

Table 5

Multi-group analysis.

Relationships	*Diff*	*z*	*p*
Direct			
Tourism Resources → Memorable Experience	0.30	40.43	0.000
Interactivity & Personalization → Memorable Experience	0.25	26.88	0.000
Accessibility & Informativeness → Memorable Experience	-0.35	-49.66	0.000
Memorable Experience → Behavioral Intention	-0.02	-7.29	0.000
Indirect			
Tourism Resources → Memorable Experience → Behavioral Intention	0.15	35.93	0.000
Interactivity & Personalization → Memorable Experience → Behavioral Intention	0.12	22.90	0.000
Accessibility & Informativeness → Memorable Experience → Behavioral Intention	-0.19	-50.33	0.000

Note. Diff = Less-tourism clustered – More-tourism clustered

Table 6

Multi-group analysis with group-wise results.

Relationships	Group	*est*	*se*	*z*	*p*	Result
Direct						
Tourism Resources → Memorable Experience	Less-tourism clustered	0.877	0.126	6.951	0.000	Supported
	More-tourism clustered	0.578	0.101	5.746	0.000	Supported
Interactivity & Personalization → Memorable Experience	Less-tourism clustered	0.984	0.152	6.462	0.000	Supported
	More-tourism clustered	0.737	0.131	5.622	0.000	Supported
Accessibility & Informativeness → Memorable Experience	Less-tourism clustered	-0.017	0.103	-0.165	0.869	Not Supported
	More-tourism clustered	0.332	0.114	2.923	0.003	Supported
Memorable Experience → Behavioral Intention	Less-tourism clustered	0.527	0.044	12.065	0.000	Supported
	More-tourism clustered	0.548	0.045	12.160	0.000	Supported
Indirect						
Tourism Resources → Memorable Experience → Behavioral Intention	Less-tourism clustered	0.463	0.068	6.796	0.000	Supported
	More-tourism clustered	0.317	0.057	5.570	0.000	Supported
Interactivity & Personalization → Memorable Experience → Behavioral Intention	Less-tourism clustered	0.519	0.081	6.374	0.000	Supported
	More-tourism clustered	0.404	0.074	5.473	0.000	Supported
Accessibility & Informativeness → Memorable Experience → Behavioral Intention	Less-tourism clustered	-0.009	0.054	-0.017	0.869	Not Supported
	More-tourism clustered	0.182	0.063	2.876	0.004	Supported