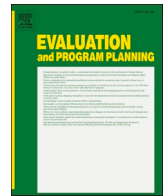




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Implementation and evaluation of tourism industry: Evidentiary case study of night market development in Taiwan

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ABSTRACT

Taiwan's night markets are the most popular and unique characteristics of domestic and foreign tourists' night life and have great potential value for tourism development. However, development of the night market is vulnerable to the negative impact of COVID-19. To discover the potential value and evaluation of the night market, we interviewed 46 experts from several industries and occupations in Taiwan to investigate the relationships between brand equity, benefits, motivations of and satisfaction with night market tourism and development. The results show that travel motivation has both direct and indirect effects on brand equity, benefits and satisfaction. Furthermore, customer satisfaction is the most critical performance attribute of night market tourism, which may be influenced by brand equity, benefit, and motivation. Managerial implications and future research directions are discussed.

1. Introduction

In the wake of fast economic growth in Asia Pacific, tourism has become the region's fastest-growing industry. Asia Pacific is now the world's second most popular destination for international tourists (Horng, Liu, Chou, & Tsai, 2012; Lee & Chien, 2008). Taiwan has an abundance of unique, natural and diverse cuisines that appeals to international tourists and promotes regional economic development (Tsai, Lin, Hwang, & Huang, 2014). The Tourism Bureau of Taiwan has invested generously in promoting the island's culinary culture. According to the statistics, night markets have become a popular destination for domestic and international tourists (Liu & Fang, 2016).

Since 2019, COVID-19 has dealt a severe blow to global tourism and hospitality industry (Chen, Huang, & Li, 2020). The recession caused by COVID-19 has brought a noticeable deterioration in Taiwan's night markets. Once noisy and bustling, many night markets are now struggling. According to the Taipei City Office of Commerce (TCOOC), even the slashing of store rental fees to NT\$60,000 in Shilin Night Market, have failed to attract interest from potential investors (Huang, 2021). Moreover, consumer behavior has been changed by the COVID-19 epidemic. For this reason, tourism managers and government should understand the relationship between brand equity and consumer

behavior, if they are to prevent the epidemic from damaging night markets' financial and economic performance (Kang, Kim, & Cha, 2018; Kim, Kim, Lee, & Tang, 2020). Moreover, despite the epidemic, brand is still a key factor affecting tourists; food choices (Kim, Kim, & Wang, 2021; Yang, Liu, & Chen, 2020).

Branding allows tourist destinations to distinguish themselves from other travel destinations, and to generate advantages for services and to build customer loyalty (Oh & Hsu, 2014; Pike & Bianchi, 2013). Night market tourism in Taiwan needs to build brand equity (Liu & Fang, 2016). Creating an appealing destination marketing strategy and identifying the critical attributes for night market tourism are topics that require further study (Liu & Fang, 2016). Therefore, it is important to understand the roles of motivation and brand equity and the benefits of night market development in terms of travel satisfaction.

This study fills a theoretical void by identifying critical attributes of night market tourism, and helping readers understand the roles of motivation and relationship in brand equity, benefits and travel satisfaction. First, we integrate previous literature in different cultures, culinary tourism, service satisfaction, and the benefits of tourism development and brand equity (Lee & Chien, 2008; Yang & Mattila, 2013). In addition, night markets in Taiwan feature diverse cultures and cuisines that attract tourists (Hsu, 2016). Despite many studies of the

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behavior of local or international tourists (Chang & Chiang, 2006), few empirical studies have solicited the opinions of experts in the development of night market tourism.

Sun, Wang, and Huang (2012)) have stated that street food vendors need better knowledge of food safety to adopt appropriate tourism strategies or allocate limited resources. However, with the COVID-19 pandemic, issues of food safety and customer satisfaction with street food and night markets are of critical importance (Yuliantoro, Juliana, Bernarto, Pramono, & Purwanto, 2020). Using the multiple methods of measurement of COVID-19 crisis and how it interacts with different attributes of the local food systems will be significant for the tourism literature (Béné, 2020; Tsai & Wang, 2017). This study extends previous studies, asserting that despite the COVID-19 crisis, tourists' concerns with benefits, motivation, brand equity and satisfaction are important factors in determining their willingness to visit night markets. Liu and Chou (2016) used hybrid methods of marketing strategy analysis to make a more meaningful contribution to the literature. Ho, Tsai, Chen, and Lu (2021)) also stated that hybrid methods provided the best model fit of measuring among numerous elements/dimensions of marketing strategy analysis during the COVID-19 pandemic. Therefore, this study uses multiple criteria and a hybrid method to analyze the proposed model and describe the relationships among the dimensions and criteria of night market tourism. In this way it helps tourism managers and resource allocators to identify the critical attributes that reduce the risks of decision failure when formulating a marketing strategy (Kaushal & Srivastava, 2021).

In addition, the literature has suggested that multiple-criteria decision-making (MCDM) gives decision makers a clear sense of the problem and possible solutions. However, until now, few studies in tourism and hospitality research have integrated all of those methods. By combining these insights, we develop an integrated model to investigate the antecedents and consequences of night market tourism in Taiwan. This study used an integrated MCDM model based on decision making trial and evaluation laboratory (DEMATEL) and analytic network processes (ANP).

Finally, this paper uses the opinions of experts and scholars in the tourism industry, government, and hospitality to investigate how brand equity, benefits and motivations create satisfaction with night market tourism and development. The research model has been developed in accordance with the research objectives and the literature. Based on the research framework in this study, we illustrate the importance of brand equity, benefit, motivations and satisfaction in night market tourism industry to develop Hypotheses 1–5. The conceptual framework is presented in Fig. 1.

2. Literature review and hypotheses

2.1. From benefit for tourism development to satisfaction and brand equity

In the early stages of night market evolution, benefits for residents, local suppliers, cultural protectors, producers and tourists are evaluated. Benefit for tourism development is very important and reflects a brand's qualifications as stakeholders with an interest or concern in tourism development. Simply, brand benefit determines evaluations of consumer satisfaction and brand equity. Satisfaction and brand equity are the two indicators of the night market's service ability to meet expectations of functional performance and exchange benefit (Hess, Story, & Danes, 2011). Theoretically, tourism development should consider these critical stakeholders' benefits so that each makes positive contributions to the others. Additionally, tourism scholars have noted that local tourism development attracts tourists who wish to experience different business, product quality, culture promotion, feedbacks and infrastructures and thus may increase the awareness of specific benefit attributes (Boniface, 2013). Therefore, specific benefit attributes that describe business, product quality, culture promotion, feedback and infrastructures should predict consumer satisfaction and brand equity.

In addition to providing basic necessities, night markets offer leisure activities and opportunities to see the traditional culture, thereby attracting tourists as well (Tsai, 2013). In this study, we advance the understanding of the drivers of travel benefit and hypothesize two positive relationships of benefits for night market tourism development which asserted that it should predict consumer satisfaction and brand equity. Very few studies of tourism have explored the effect of travel benefit on satisfaction and brand equity (Iglesias, Markovic, & Rialp, 2019). According to tourism studies by Huang and Liu (2018), travel benefit is a key factor in travelers' perceived satisfaction and value evaluation when engaged in culture tourism. On one side, benefit of travel entertainment and appealing experience both seem to affect tourist satisfaction (Liu, Huang, & Li, 2018). It is therefore important for researchers to pay attention to the cultural experience of night market tourism (Liu & Fang, 2016). At the same time, travel benefit is also a critical attribute of brand equity development. Tasci asserted that consumer value and benefit perception have long been recognized as critical influences on other concepts, such as brand awareness, image, perceived quality, pleasure and loyalty. In other words, perceived consumer satisfaction and brand equity are more likely to occur after the benefits of tourism development have been established. Accordingly, the following two hypotheses are proposed:

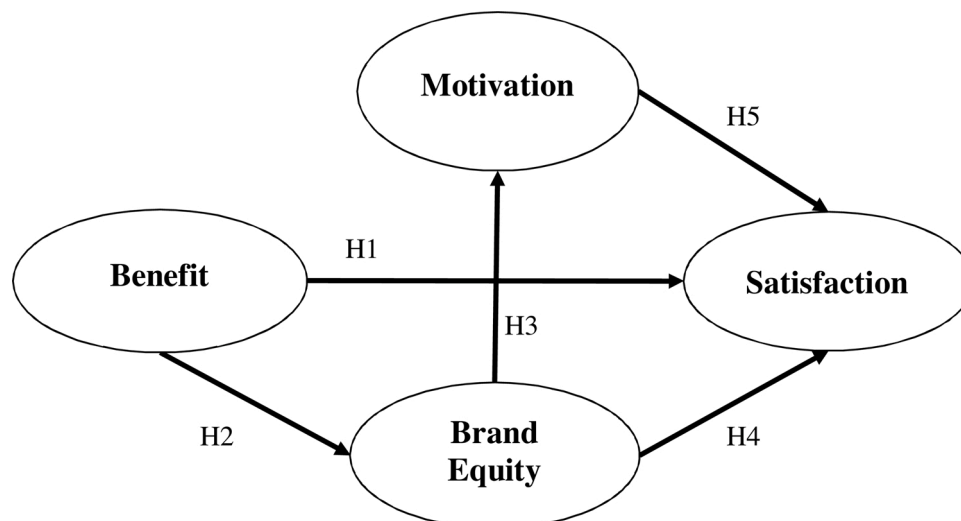


Fig. 1. Research framework.

Hypothesis 1. *Benefit for tourism development positively influences satisfaction.*

Hypothesis 2. *Benefit for tourism development positively influences brand equity.*

2.2. From brand equity to motivation and satisfaction

Brand equity is a core marketing strategy for tourism managers and is accepted as a powerful competitive tool for long-term destination management (Blain, Levy, & Ritchie, 2005). Although brand equity has emerged as one of the most fundamental topics for customer-based perspectives in tourism marketing management (Huang & Cai, 2015), it the pivotal role of visual images in brands should be evaluated from the perspectives of brand salience, image, quality, value, brand loyalty and its implications for destination management (Boo, Busser, & Baloglu, 2009).

A night market's brand equity is reflected in the quality and variety of the products, convenience, prices, physical environment and service quality (Beristain & Zorrilla, 2011). Stakeholders use brand equity to form an evaluation that will affect their motivation and satisfaction toward the night market (Semeijn, Van Riel, & Ambrosini, 2004). Indeed, the considerable benefits can gain from brand equity, including strengthening the night market's reputation, commitments, differentiation, purchase intent, consumer identification and outcome performance (Beristain & Zorrilla, 2011). In this regard, brand equity has a positive effect on stakeholders' motivation or satisfaction with the night market.

Second, as tourists return to the night market, brand equity supplies the conditions necessary for the brand to become associated with personal memory. In fact, brand equity introduces a relationship benefit structure that depends on motivation or satisfaction. The evolution from a relationship formed with an initial brand equity building, through an exchange relationship with motivation or satisfaction, could increase relationship by all members of a night market with the brand equity. In this way, brand equity is a predictor for motivation or satisfaction. Thus, we hypothesize that the associated perception of brand equity with motivation and satisfaction is the condition necessary for a transaction reflective of a favorable motivation or satisfaction view with the brand equity relationship. Based on all of the above, we posit the following hypotheses:

Hypothesis 3. *Brand equity positively influences motivation.*

Hypothesis 4. *Brand equity positively influences satisfaction.*

2.3. From motivation to satisfaction

Much of the research in leisure satisfaction in travel and tourism has focused on tourists' experiences after consumption (Chen, Petrick, & Shahvali, 2014) and reactions from expectations and feelings (Kim & Fesenmaier, 2014). In the tourism context, tourists' satisfaction evaluation is correlated with pre-travel expectations and post-travel experiences (Chen & Chen, 2010, p.30). When consumption experiences and expectations are gratifying, the tourist is satisfied. However, when actual experience falls short of expectations, negative emotions and dissatisfaction result (Reisinger & Turner, 2003). Hui, Wan, and Ho (2007, p.966) suggested that tourist satisfaction is a function of the appropriateness between expectations and the perceived evaluation outcome, which is simply the result of a comparison between tourists' previous travel experience and what they actually perceive, touch, and achieve at the destination.

Motivation plays a pivotal role in creating both satisfaction and associations. Functionally- or leisure-oriented tourism usually forms first in motivation-satisfaction connective relationships, but relationship depth and tourism-inducing behaviors begin once consumers' connections and begin to moderate satisfied benefit calculations (Aggarwal,

2005). In other words, an ongoing value-based relationship transforms the motivation into consumers' personal tourism satisfaction through the dimension of novelty, budget, culture protector, escape stress, attractions, family togetherness, relax and socialization. In the absence of the motivation connections, functionally- or leisure-oriented tourism satisfaction, manifested in an tourism willingness and interests in night market tourism, may still result in market loyalty, intention to continue visiting, purchasing the night market's products and likelihood of recommending the market brand to others, that appears as tourism satisfaction. We therefore propose the following hypothesis:

Hypothesis 5. *Motivation positively influences satisfaction.*

3. Research methods and process

3.1. Research setting and sample

The night market is a Chinese tradition. Taiwan's night markets are popular places for locals and tourists to enjoy real Taiwanese food. The night market is a Chinese tradition. Taiwan's night markets are popular places for locals and tourists to enjoy authentic Taiwanese food. In the formulation of Taiwan's tourism strategy, government depend on expert advice in industrial environment design and critical attributes identification (Hornig, Liu, Chou, Yin, & Tsai, 2014; Liu & Chou, 2016). Our aims were to enrich the tourism and management literature on night market tourism critical attributes identification by determining how experts interpret night market tourism and identify critical attributes of the market development to improve the quality of political decision making. We therefore conducted a qualitative and quantitative study and system analysis of experts' advice in Taiwanese night market (Hornig et al., 2012).

In the early stages of data collection, we obtained a diverse sample to match the literature. We used purposive sampling. In the later stages, when we clarified our proposed integrated model, we found informants through personal contacts (Chuang, Hsu, Wang, & Judge, 2014). In the Chinese cultural context, personal contacts yield abundant and valuable information. Moreover, informants may not be candid with an unfamiliar interviewer. Thus, through personal relations and individual contacts, 46 experts from a range of industries and occupations offered their professional opinions on night market operation, tourism and development. They had an average of 11.37 years of work experience in night market operation, 11.37 years in resources allocation or research, and their average age is 41.80. Those experts can be classified into (1) vendors, managers or owners in night markets, coding VM1 to VM16; (2) people in government responsible for night market tourism policy planning, including government officer of Tourism Communication Bureau, Industrial Development Bureau, Taipei City Marketing Management Department, and other government departments, coding as GM1 to GM21; and (3) scholars with research or academic experience in night market tourism, coding as SA1 to SA9. The authorities are the Department of Economic Development (DED) and the Department of Information and Tourism (DIT). The Night Market Tourism Development Association (NMTDA) was under government counselling and established by all vendors of the night market. The missions of NMTDA are operation management, marketing, sanitation and safety. To understand the development strategy of brand equity in the tourism night market, the experts of questionnaire include DED and DIT supervisors and commissioners, the chairman and project manager of NMTDA in Taiwan north, central and south, and the scholars who have studied the development of the tourism night market. The results of this study will provide valuable information for DED, DIT and NMTDA in making policy decisions.

Before the experts completed the questionnaire, the researcher asked them if they had engaged in formulating or implementing night market tourism policy, whether they promoted tourism, and whether they had at least five years of work experience in night markets. The experts who

gave their input to our study had either planned or participated in night market tourism policy development, and each tourism industry expert has more than five years' experience in the tourism service. Therefore, they were able to provide suggestions that were relevant to measuring the motivation and satisfaction of tourists with the night market. Further, most vendors at the night market were small and medium enterprises (SME) that need the government support. Detailed information of the expert samples is shown in Table 1.

3.2. Measures

3.2.1. Brand equity

Previous studies in tourism marketing have discussed destination brand equity in terms of tourists' evaluation of awareness of, image of, quality of, and loyalty to the destination (Konecnik & Gartner, 2007). The suitability of the consumer-based brand equity (CBBE) model of brand salience, brand image, brand quality, brand value, and brand loyalty for benchmarking brand performance (Pike & Bianchi, 2013). The objective cognitive image in destination personality and global image in brand attitude and behavioural intentions (Baloglu, Henthorne, & Sahin, 2014); hotel brand identity with cross-cultural examination (Oh & Hsu, 2014); and the discovery of marketing strategy for destination branding to the demand for Short-Haul and Long-Haul

Markets (Pike & Bianchi, 2013). These discussions imply that effective tourism marketing strategy not only builds incremental value in the minds of tourists, which might foster greater confidence in the destination brand, but also encourages tourists' travel and revisit intentions.

On the basis of these tourism and hospitality studies, the role of destination brand equity was examined in night market tourism. According to the literature, the dimensions of brand loyalty, brand image, perceived quality and brand awareness were commonly used in prior studies (Hornig et al., 2012). This research adopts those dimensions and advances the tourism literature by providing more insight into the evolving theory of destination brand equity for night market tourism.

3.2.2. Satisfaction

Past studies have suggested that perceptions of interesting attractions and value affect satisfaction (Tosun, Temizkan, Timothy, & Fyall, 2007), and that satisfaction has a significant effect on the post-behaviours of recommending the destination to friends and revisiting (Lee, Yoon, & Lee, 2007). Yang and Mattila (2013) review the factors of interesting attractions as "cognitive maps" that should be considered in satisfaction along with the type of information or stimuli presented during the experience. Following the same logic, dissatisfied tourists may not return to a destination and may not recommend it to other tourists. Even worse, dissatisfied tourists may spread negative

Table 1
Demographic information for samples.

Coding	Gender	Age	Position	Experience/Year	Organization size/ Person	Cetology
1.SA1	Male	46	Assoc. Professor	10	30	
2.SA2	Male	39	Assoc. Professor	12	24	
3.SA3	Male	46	Professor	10	18	
4. SA4	Male	48	Assoc. Professor	20	7	
5. SA5	Female	38	Assist. Professor	13	15	Tourism Scholar
6. SA6	Male	59	Professor	25	8	
7. SA7	Male	47	Assoc. Professor	16	12	
8. SA8	Male	42	Assist. Professor	6	22	
9. SA9	Male	55	Professor	20	7	
10.GM1	Female	43	Manager	3	50	
11. GM2	Female	32	Group leader	6	23	
12. GM3	Female	55	Senior manager	12	58	
13. GM4	Female	46	Central director	10	77	
14. GM5	Male	41	Director	5	5	
15. GM6	Male	52	General Manager	15	9	
16. GM7	Female	30	Staff	1	12	
17. GM8	Female	50	Team Leader	5	6	
18. GM9	Male	60	Director	30	6	
19.GM10	Female	49	Director	24	76	
20.GM11	Female	42	Group Leader	10	25	Practical industry
21.GM12	Female	38	Group Leader	9	25	
22.GM13	Male	37	Manager	10	36	
23.GM14	Female	32	Staff	5	23	
24.GM15	Female	28	Staff	5	22	
25.GM16	Male	39	Senior Manager	18	34	
26.GM17	Female	58	Director	30	56	
27.GM18	Female	37	Manager	9	55	
28.GM19	Female	33	Manager	5	18	
29.GM20	Male	36	Senior Manager	8	18	
30.GM21	Female	29	Staff	3	120	
31.VM1	Male	32	Owner	3	7	
32.VM2	Female	40	Owner	5	10	
33.VM3	Female	33	Owner	2	6	
34.VM4	Female	52	Manager	6	8	
35.VM5	Male	54	Owner	25	3	
36.VM6	Female	27	Owner	2	5	
37.VM7	Female	26	Owner	4	3	
38.VM8	Male	52	Owner	20	3	
39.VM9	Female	46	Owner	17	2	Vendor
40.VM10	Male	58	Owner	30	2	
41.VM11	Male	39	Owner	18	30	
42.VM12	Male	46	Owner	10	3	
43.VM13	Male	31	Owner	10	1	
44.VM14	Male	26	Owner	2	2	
45.VM15	Male	32	Owner	4	2	
46.VM16	Female	42	Owner	10	2	

comments and undesirable information about their experience, thereby damaging the destination's reputation (Reisinger & Turner, 2003).

3.2.3. Travel motivation

In most situations where visitors are heterogeneous and have different purposes in their leisure activities, identifying these groups' travel motivation will be a powerful marketing strategy, one that shows critical directions for rural tourism managers to manage tourists' behavior (Eid & El-Gohary, 2015). Prior studies have viewed travel motivation in multidimensional constructs. For example, Lee et al. (2004) identified visitors' motivations for attending a festival in South Korea. Thirty-four motivation items are factor analysed, and six dimensions of motivation emerged: "cultural exploration," "family togetherness," "novelty," "escape from stress," "event attractions," and "socialization." Mohr, Backman, Gahan, and Backman (1993) categorised travel motivations into 23 items, and five factor groupings emerged: "socialization," "family togetherness," excitement/uniqueness," "escape," and "event novelty." In conclusion, multidimensional constructs and attributes of travel motivation should be considered and characteristics of tourists should be explored in the differentiation of marketing strategies for tourism managers.

Benefit for tourism development. Well-designed tourism maps or activities promoted by an effective marketing campaign can generate revenue for local suppliers and producers (Alonso & Bressan, 2014) and enhance the image of Taiwanese night markets as a tourist destination. Furthermore, night market tourism assists in product diversification by offering tourists an added recreational facility and increasing the country's competitiveness as a tourist destination. There would, of course, be the additional benefits of creating a few local tourism jobs (Liu & Fang, 2016). Each stakeholder's interests in night market tourism is collected based on the perspectives of experts. This study discusses how these dimensions influence each other.

3.3. Model and estimation

3.3.1. The MCDM methodology

Organizational managers often select a decision-making process over another that can improve their financial or innovation performance (Belton & Stewart, 2002). Decision problems have become more complex than ever, forcing managers to find new approaches and methodologies that enable them to structure and evaluate complex decision situations, and can allow for more informed and potentially better decisions (Carayannis, Ferreira, Jalali, & Ferreira, 2018). When decision makers need to consider two or more goals at the same time, Multiple Criteria Decision Making/Analysis (MCDM/A) constitute valuable tools for structuring and evaluating complex decision situations, and can allow for more informed, potentially better decisions (Belton & Stewart, 2002). MCDA techniques build on the knowledge of expert participants in a field, and produce assessment systems based on their values and experience while considering interrelated factors (Keeney, 1992). Like other conventional evaluation methods, MCDM can quickly judge and weigh each criterion by computer technology, and quickly reach a consensus (Liu & Chou, 2016; Tzeng & Huang, 2011). However, in addition to it's, the quality of MCDM depends on the selected experts. Therefore, the interpretation of the results is limited by the experts.

Finally, the survey is conducted through a matrix questionnaire, so if there are 10 criteria, there will be $20 \times 20 = 400$ questions. Therefore, if the questionnaire is too long, the experts will need more time to complete it, and this may affect their willingness to fill it out.

3.3.2. The analysis method for judgment criteria importance

Fuzzy Delphi Method (FDM) was proposed by Ishikawa et al. to solve the problems with the Tradition Delphi method and collects experts' opinions on issues that are not clear. FDM uses two terminal points (max/min values) of triangular fuzzy numbers to obtain a statistically unbiased effect and to avoid extreme values. We used DEMATEL to

construct the research model. The advantage of DEMATEL is that it can convert the relationship between the causes and effects of the criteria into an intelligible structure and is an effective procedure for decision making and analysis. It has been widely used in tourism and hospitality management studies (Hornig et al., 2014; Tsai et al., 2014). In tourism management analysis, the DEMATEL can produce a criteria network-relationship map through a matrix calculation. It can present the causal relationships and visualise the results, eventually helping tourism and hospitality managers answer the main questions (Hornig et al., 2014). Analytic Network Process (ANP) was originally proposed by Saaty (1996), who used a network pairwise comparison procedure and nonlinear analysis designed to capture judgments in a manner that ensures consistency and acquires priority. The ANP has been used in tourism policy analysis (Hornig et al., 2014), tourism branding (Chen, Lee, & Yang, 2012), and hotel corporate social responsibility (CSR) program selection decisions (Tsai et al., 2014). Therefore, this study adopted a DEMATEL process to draw the relationships between main dimensions and sub-attributes and used ANP to calculate the weighting and to compare standards among dimensions.

4. Results

4.1. Analysis of night marketing tourism brand equity development criteria

For the processed FDM analysis, this study included four dimensions and 21 criteria (Table 2). Each criterion's relative importance was >0.7 past the accepted standard. The results confirmed that the experts recognized night marketing tourism brand equity development criteria; thus, we could construct a criteria network-relationship map of the night marketing tourism brand equity development model.

4.2. Construct criteria network-relationship map of night marketing tourism

Through the DEMATEL step used to calculate the initial average matrix T and using a pair of degrees of interaction for any two criteria to calculate the initial direct effect of matrix B , we examined dimensions. The influential relationship ($R + C$, $R-C$) shows the results of those dimensions and the results of the examined criteria (Table 3). Based on the criteria, a criteria network-relationship map (Fig. 1) was constructed.

According to the influential relationship, benefit (B) has the most direct effect on other dimensions. In other words, the experts believe that tourism benefit was night marketing tourism development's most influential dimension. The dimensions that follow are brand equity (A), motivation (C) and satisfaction (D). This study found that understanding, analysing and stimulating tourist motivations are the most influential factors on the development of Taiwan night marketing tourism. Thus, the findings of this study provide clear examples of the value attained by tourist motivation encouragement in night market tourism, confirming that the night market development decision makers or managers should take an interest in how to increase tourist motivation and improve the attractiveness of night market tourism (Fig. 2).

In addition, the criteria network relation map can be seen as influential in each dimension. According to these study experts, the first relational dimension of the Taiwan tourism night market development strategy was Motivation (C). Under the motivation dimension, this study found Novelty (c1) to be the top criterion, followed by Attractions (c5), Cultural protector (c3), Budget (c2), Socialization (c8), Relaxation (c7), Family togetherness (c6) and escape from stress (c4) (Fig. 3). Fig. 3b shows that novelty and interesting experience may attract the attention of tourists, thus confirming that travel motivation was the key factor in travel intentions and satisfaction, both of which come from individual perceptions of previous experiences and information from media and other people. Yuan and McDonald suggested that novelty, prestige, relaxation, escape from routine, and self-exploration, segment

Table 2
Results Obtained by the Fuzzy Delphi Method.

Dimension	Criteria	Triangular fuzzy number			Relative importance (>0.7)
		Min	Geometric mean	Max	
A. Brand Equity	a1. Brand awareness	0.4	0.8	1.00	Accepted
	a2. Brand quality	0.3	0.7	1.00	Accepted
	a3. Brand loyalty	0.5	0.7	1.00	Accepted
	a4. Brand image	0.5	0.8	1.00	Accepted
B. Benefit	b1. Local supplier	0.2	0.7	1.00	Accepted
	b2. Cultural protector	0.3	0.8	1.00	Accepted
	b3. Producer	0.4	0.7	1.00	Accepted
	b4. Resident	0.4	0.7	1.00	Accepted
C. Motivation	b5. Tourist	0.3	0.7	1.00	Accepted
	c1. Novelty	0.4	0.8	1.00	Accepted
	c2. Budget	0.5	0.8	1.00	Accepted
	c3. Cultural exploration	0.5	0.8	1.00	Accepted
	c4. Escape stress	0.2	0.7	1.00	Accepted
	c5. Attractions	0.4	0.8	1.00	Accepted
	c6. Family togetherness	0.2	0.7	1.00	Accepted
	c7. Relax	0.4	0.8	1.00	Accepted
D. Satisfaction	c8. Socialization	0.5	0.7	1.00	Accepted
	d1. Recommend	0.5	0.8	1.00	Accepted
	d2. Revisit intention	0.5	0.8	1.00	Accepted
	d3. Interesting	0.5	0.8	1.00	Accepted
	d4. Experience	0.6	0.9	1.00	Accepted

Table 3
Total-Influence Matrix T: Four Dimensions.

Dimension	A	B	C	D	Row sum (d_i)	Column sum (r_i)	$d_i + r_i$	$d_i - r_i$
A. Brand Equity	0.320	0.314	0.291	0.346	1.271	2.222	3.494	-0.951
B. Benefit	0.302	0.287	0.269	0.317	1.174	2.047	3.221	-0.872
C. Motivation	0.289	0.278	0.271	0.310	1.148	2.007	3.154	-0.859
D. Satisfaction	0.342	0.323	0.306	0.349	1.320	2.298	3.617	-0.978

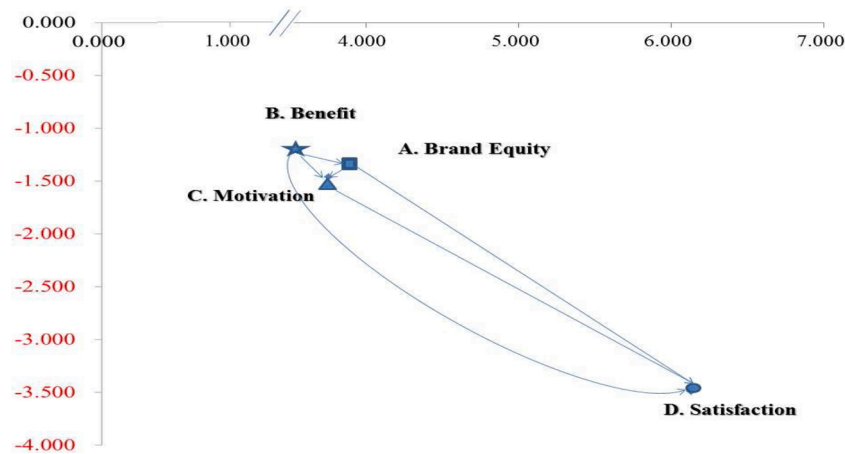


Fig. 2. Impact-digraph map of main dimensions for night market tourism.

characteristics based on motivations, are push factors. Novelty was ranked as the most important push factor in the decision for an overseas vacation.

According to these study experts, the second relational dimension of Taiwan tourism night market development was Benefit (B) (Fig. 3c). Under this dimension, tourists (b5) exert a direct effect on cultural protectors (b2), producers (b3), and residents (b1). The experts found that being interesting are the foundational attribute for the benefit dimension. The results are similar to those of Chang and Hsieh (2006), who asserted that night markets are an essential part of the nightlife for tourists, and that tourists are the main economic sources of night market development. Horng et al. claim that Taiwanese culture is highly influenced by Japan, the US and China; thus, Taiwan has cultural

diversity, and people respect each other's differences. With this distinction, the foods offered at night markets draw tourists. Furthermore, experts have recognised that the benefits of night market tourism development must consider cultural protection. Thus, tourism development and related commercial activities may involve mutual benefits, but also trade-offs and the loss of irreplaceable cultural features.

Based on the criteria under the dimension Brand Equity (Fig. 2a), it can be observed that brand image (a4) had a direct effect on brand quality (a2), brand awareness (a1) and brand loyalty (a3). The results show that tourism destination "image" was a key factor in the development of Taiwan's tourism night brand equity. Brand image needs to be enhanced.

Finally, this study proposed that increasing tourists' satisfaction is

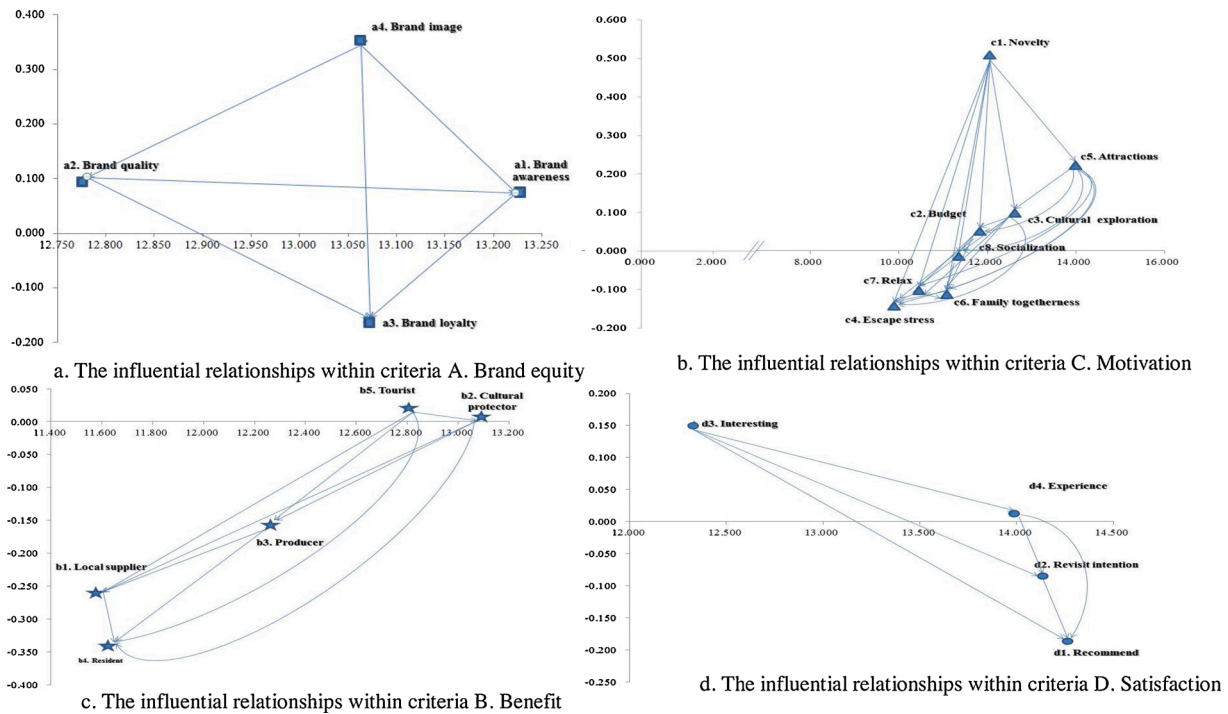


Fig. 3. The impact-digraph-map of sub-dimensions for night market tourism.

critical for the future development of night markets (2d). In discussing the dimensions of satisfaction, encouraging tourists' interest becomes the foundation for enhancing and influencing experience (d4), revisit intention (d2) and recommendation (d1). In past tourism studies, interesting activities and ensuring tourists' satisfaction are recognised as central to the success of tourism industries (Hui et al., 2007). Satisfied tourists are always interested in tourism products or services and are willing to make recommendations to others. Thus, tourist satisfaction would be based on interesting experiences and the favourable evaluation of attractions, facilities, services and price (Yu & Goulden, 2006).

4.3. Importance ranking of night market tourism brand equity development

Hong et al. (2012) suggested that the ANP summarises information, quantifies the importance of attributes, and identifies interdependent relationships within and between measuring elements. This study confirms the relationship between the tourism night market brand equity development model and the analysis of each dimension and criterion weight. This study is based on DEMATEL results and calculates the total-influence matrix T, the weight of each dimension and criterion (Table 3).

Each row represents the weight of each criterion. According to ANP's calculation of the results, Satisfaction (D) 0.269 was the most important dimension, followed by Brand Equity (A) 0.255, Benefit (B) 0.245 and Motivation (C) 0.231. Based on the ANP results, satisfaction is more important than other dimensions in developing night market tourism. Yu and Goulden (2006) suggested that satisfaction affects tourists' intentions to return and make recommendations to others. It also affects post-behaviours and regions' tourism development, both of which are critical attributes for tourism policy decision making. Furthermore, maintaining a high level of customer satisfaction is more likely to be helpful for tourism destination brand equity (Boo et al., 2009).

Based on the global and local levels, the weight and ranking yield the weight value. Under the dimensions Satisfaction (D), Recommend (d1) had a 0.264 local weight and was the highest criterion, followed by Revisit intention (d2) 0.260, Experience (d4) 0.255 and Interest (d3)

0.222. The results can also be shown in the remaining criteria of each dimension. Petrick and Backman (2001) noted that satisfaction appears to be the most reliable predictor of intentions to revisit. High levels of customer satisfaction also accompany enjoyable experience, and customers who enjoy their experience are more likely to return, spread free word-of-mouth and recommend the destination to friends or other potential customers (Boo et al., 2009).

In the dimension Brand Equity (A), the values of the criteria are as follows:

Brand loyalty (a3), 0.255; Brand awareness (a1), 0.254; Brand image (a4), 0.246; and Brand quality (a2), 0.245. Destination branding is more complex, evaluating the system more than merely the design of tourism product names or services (Pike, 2005). In terms of visitation intent, the main purpose of destination branding should be to stimulate intention to visit and revisit, which are indicators of brand loyalty (Pike & Bianchi, 2013, p.2). The branding literature proposes that loyal customers are more profitable; they are less price-sensitive and spend more, which can result in positive word of mouth (Jones & Taylor, 2007). Thus, brand loyalty is the foundation of destination brand equity and plays a critical role in the development of tourism branding (Keller, 1993; Konecnik & Gartner, 2007).

Furthermore, the ANP result under Benefit (B) shows values for measuring criteria as follows: Cultural protector (b2), 0.211; Tourist (b5), 0.206; Producer (b3), 0.200; Resident (b4), 0.193; and Local supplier (b1), 0.191. Kivela and Crofts (2006) found local cultural experience to be an attractive form of travel, based not only on participating in a particular lifestyle but also on engaging in complementary activities. This was supported by Gómez and Molina (2012), who examined the antecedents of wine tourism in Spanish regions that present cultural attractions for tourists. Kivela and Crofts (2006) suggested that cuisine plays an important role in attracting visitors to experience rural and cultural tourism, producing economic benefits. Liu and Fang (2016) suggested that Taiwanese cuisine is one of the most important reasons why tourists visit Taiwan, and night markets are the best place for international tourists to find diverse gourmet displays and local culture.

The criteria evaluation of the final dimension Motivation (C) are as

Table 6
limit matrix Z: Twenty one criteria.

Dimension	Criteria	A1	A2	A3	A4	B1	B2	B3	B4	B5	C1	C2	C3	C4	C5	C6	C7	C8	D1	D2	D3	D4
A. Brand Equity	a1. Brand awareness	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065
	a2. Brand quality	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062	0.062
	a3. Brand loyalty	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065	0.065
	a4. Brand image	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063	0.063
B. Benefit	b1. Local supplier	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047
	b2. Cultural protector	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052	0.052
	b3. Producer	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049	0.049
	b4. Resident	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047	0.047
C. Motivation	b5. Tourist	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050	0.050
	c1. Novelty	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029
	c2. Budget	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029	0.029
	c3. cultural exploration	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031	0.031
	c4. Escape stress	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025
	c5. Attractions	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034	0.034
	c6. Family togetherness	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026	0.026
	c7. Relax	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028
D. Satisfaction	c8. Socialization	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028	0.028
	d1. Recommend	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071	0.071
	d2. Revisit intention	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070	0.070
	d3. Interesting	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060	0.060
d4. Experience	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069	0.069

follows: Attractions (c5), 0.148; Cultural protector (c3), 0.135; Budget (c2), 0.127; Novelty (c1), 0.125; Socialization (c8), 0.122; Relaxation (c7), 0.120; Family togetherness (c6), 0.113; and Escape from Stress (c4), 0.108. In the night market tourism evaluating model, attractions are an important antecedent to motivation, and tourism managers and decision makers should acknowledge the contents of motivation to be competitive in the marketplace. This study adopted ANP based on DEMATEL result process to calculate the weight of each attribute. We adopted [Hornig, Liu, Chou, Tsai, and Hu \(2018\)](#) and [Liu and Chou \(2016\)](#) research description of MCDM technique in various steps as showing below:

4.3.1. Calculate the unweighted supermatrix

The unweighted super matrix was obtained by DEMATEL result. The original impact matrix of DEMATEL is obtained by averaging the responses of all the interviewed experts. Each expert was asked to provide a weight for each criterion based on their experiences. The weight ranges from 0 to 4 (0 = no influence, 1=weak influence, 2=medium influence, 3=strong influence and 4= very strong influence. The direct influence matrix can be calculated by the maximum value of the sum of all the rows or columns in the original influence matrix T. Each element in matrix T falls between zero and one. All principal diagonal criteria are equal to zero and formula (1) calculates the normalized direct relation matrix and total influence matrix. The result of Total-influence matrix T (unweighted supermatrix) see [Table 4](#).

$$T = (T_j)n*1 = (T_j) 1*n = \left[\sum_{i=1}^n t_{ij} \right] \tag{1}$$

4.3.2. Calculate the weighted supermatrix

Compare the criteria in the whole system to form an original supermatrix. The unweighted supermatrix is developed. Normalize each level with the total degree of effect based on the DEMATEL result matrix T, which is listed in formula (2).

$$T_a = \begin{matrix} & D_1 & D_j & D_n \\ & a_{11} \dots a_{11} & m_1 \dots a_{j1} & \dots a_{mj} \dots a_{n1} \dots a_{nm_n} \\ & a_{11} \\ & a_{12} \\ & \vdots \\ & a_{1m_1} \\ & \vdots \\ & a_{i1} \\ & a_{i2} \\ & \vdots \\ & T_a^{i1} \dots T_a^{ij} \dots T_a^{in} \\ & \vdots \\ & \vdots \\ & \vdots \\ & a_{n1} \\ & c_{n2} \\ & \vdots \\ & D_3 \\ & \vdots \\ & c_{nm_n} \end{matrix} \begin{bmatrix} T_a^{11} & \dots & T_a^{1j} & \dots & T_a^{1n} \\ \vdots & & \vdots & & \vdots \\ T_a^{i1} & \dots & T_a^{ij} & \dots & T_a^{in} \\ \vdots & & \vdots & & \vdots \\ T_a^{n1} & \dots & T_a^{nj} & \dots & T_a^{nn} \end{bmatrix} \tag{2}$$

Then place the result of these computations within the supermatrix (unweighted supermatrix X), which is listed in formula (3). The result of weighted supermatrix see [Table 5](#).

Table 7
Weights and Ranking for the Dimension and Criteria of DANP Results.

Criteria		Global weight	Dimension	Local weight	Ranking	Criteria	Local weights	Ranking
a1.	Brand awareness	0.065	A. Brand Equity	0.255	2	a1.	0.254	2
a2.	Brand quality	0.062				a2.	0.245	4
a3.	Brand loyalty	0.065				a3.	0.255	1
a4.	Brand image	0.063				a4.	0.246	3
b1.	Local supplier	0.047	B. Benefit	0.245	3	b1.	0.191	5
b2.	Cultural protector	0.052				b2.	0.211	1
b3.	Producer	0.049				b3.	0.200	3
b4.	Resident	0.047				b4.	0.193	4
b5.	Tourist	0.050				b5.	0.206	2
c1.	Novelty	0.029	C. Motivation	0.231	4	c1.	0.125	4
c2.	Budget	0.029				c2.	0.127	3
c3.	Cultural exploration	0.031				c3.	0.135	2
c4.	Escape stress	0.025				c4.	0.108	8
c5.	Attractions	0.034				c5.	0.148	1
c6.	Family togetherness	0.026				c6.	0.113	7
c7.	Relax	0.028				c7.	0.120	6
c8.	Socialization	0.028	D. Satisfaction	0.269	1	c8.	0.122	5
d1.	Recommend	0.071				d1.	0.264	1
d2.	Revisit intention	0.070				d2.	0.260	2
d3.	Interesting	0.060				d3.	0.222	4
d4.	Experience	0.069	d4.	0.255	3			

$$X = \begin{matrix} & D_1 & \dots & D_j & \dots & D_n \\ & a_{11} & \dots & a_{1m_1} & \dots & a_{j1} & \dots & a_{jm_j} & \dots & a_{n1} & \dots & a_{nm_n} \\ D_i & a_{i1} & & & & & & & & & & & \\ & a_{i2} & & & & & & & & & & & \\ & \vdots & & & & & & & & & & & \\ & a_{1m_1} & & & & & & & & & & & \\ & \vdots & & & & & & & & & & & \\ & a_{i1} & & & & & & & & & & & \\ & \vdots & & & & & & & & & & & \\ D_j & a_{j2} & & & & & & & & & & & \\ & \vdots & & & & & & & & & & & \\ & a_{imi} & & & & & & & & & & & \\ & \vdots & & & & & & & & & & & \\ & a_{n1} & & & & & & & & & & & \\ & \vdots & & & & & & & & & & & \\ D_n & a_{n2} & & & & & & & & & & & \\ & \vdots & & & & & & & & & & & \\ & a_{nm_n} & & & & & & & & & & & \end{matrix} \begin{matrix} X^{11} & X^{i1} & \dots & X^{1n} \\ \vdots & \vdots & & \vdots \\ X^{1j} & X^{ij} & \dots & X^{2n} \\ \vdots & \vdots & \ddots & \vdots \\ X^{1n} & X^{in} & \dots & X^{nn} \end{matrix} \quad (3)$$

4.3.3. Calculate the limit matrix

Conduct pairwise comparisons on the clusters and weight the blocks of the unweighted supermatrix, by the corresponding priorities of the clusters, so that it can be column stochastic (normalized weighted supermatrix). Then raise the weighted supermatrix to limiting powers until the weights converge and remain stable (limited supermatrix Z). The ANP weights of each attribute (cluster matrix) can be obtained by formula (4). For the result of limit matrix, see Table 6.

$$\lim_{z \rightarrow \infty} (w^\alpha)^z \quad (4)$$

The DANP results are shown in Table 7. Through these results, the tourism marketing brand equity strategy development can be used for decision makers to find the key factors and the ranking of the factors according to this integrated index, either from the importance of the main criteria as a whole or from the ranking of dimension and criteria analysis.

4.3.4. Robustness testing the relationships among night market tourism attributes

There is an ongoing discussion in the tourism literature, and results of this study on the relationships among night market tourism attributes are relevant. Several measures and tests should be proposed and used in this study. Thus, to assess the robustness of our findings, we tested the DEMETEL results using alternative measures of the structural equation model (SEM). The standardized solutions computed by the AMOS 18 maximum-likelihood method are reported in Fig. 4, which has been used in previous tourism studies (Eid & El-Gohary, 2015). The SEM can

minimise measurement errors and multicollinearity because each latent variable is used as a single factor (Park, 2012).

We then conducted confirmatory factor analysis to evaluate discriminant validity; the results of the four-factor model fit the data best for measuring night market tourism (RMSEA = .078, GFI = .857, AGFI = .827, CFI = .927, IFI = .918; $\chi^2_{(182)} = 326.927$). Using the structural equation model, we tested one full model and three alternative models to examine the applicability of the direct and indirect effects. Fig. 4 presents the goodness-of-fit indices for the proposed model and alternative models; the direct models are favoured with proposed

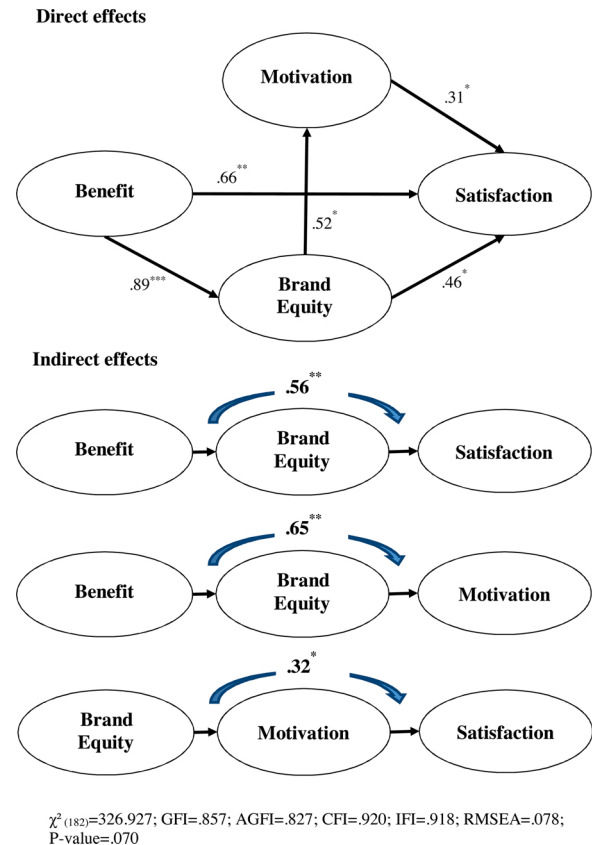


Fig. 4. Results of Structural Equation Modelling (SEM).

positive relationships in five hypotheses, in which the indirect model confirms the mediating role of brand equity and motivation. Thus, we found the similar pattern of statistically significant results with DEMETEL.

5. Conclusion and policy implications

5.1. Conclusions

Following the internationalization and globalization of tourism development, the night market is economically beneficial for Taiwan's regional development. The Taiwan government applied the lessons learned from the SARS epidemic to COVID-19 (Kuo, Shih, Chien, & Hsiung, 2020; Wang, Ng, & Brook, 2020). With the popularity of the vaccine, Taiwan's tourism market is showing a rapid recovery (Zhang, Song, Wen, & Liu, 2021). Promoting and identifying the critical attributes and mutual relationships of tourism industry during the COVID-19 pandemic is important for present and future policy making (Ho et al., 2021; Liu, Chen, & Hwang, 2020). On September 16, 2019, Taiwan's Ministry of Economic Affairs introduced NT\$200 (US\$6.5) hotel vouchers that independent tourists can spend at night markets if they stay in hotels that participate in the government's subsidy program. The vouchers, intended to stimulate tourism, are issued by the Tourism Bureau and can be used at 83 night markets across Taiwan. To identify public- and private-sector interventions to develop the night market in Taiwan, this study has provided detailed information on the participants. The officers who were interviewed came from the Tourism Communication Bureau, the Industrial Development Bureau, and Taipei City Marketing Management Department.

This study extends previous research that combined several methods and conducted robustness testing on the relationships among the attributes of night market tourism. System analysis revealed the following results. In the main dimension analysis, multiple mediation roles of brand equity and motivation were found, linking tourism benefit to tourist satisfaction. Customer satisfaction emerged as the critical performance attribute of night market tourism, which may be influenced by brand equity, benefit, and motivation. In the sub-dimension analysis, for brand equity, brand loyalty is affected by perceived quality, brand awareness and image.

In addition, when DANP analysis was applied, the criterion of resident benefit scored higher than other attributes of the benefits of night market development, suggesting that night market development both creates local jobs and makes the market eligible for state resources. Moreover, in the analysis of travel motivation, escape from stress is affected by other criteria, meaning that night market tourism is an escape from a stressful work environment (Chuang, Hsu et al., 2014).

Finally, when considering the satisfaction dimension in night market tourism, vendors and managers should consider the word-of-mouth (WOM) effect. These findings lead us to understand that critical attributes of brand equity, benefit, motivation and satisfaction may be inextricably linked to tourism activity. These attributes therefore warrant further study and elaboration, particularly in night market tourism development where the results can be amplified and extended to a variety of audiences.

The pandemic outbreak inevitably leads to weaker external demands and disruption of tourism industry, which certainly hurts the development of Taiwan's night market. The results of this study help to expand the information for implementation and evaluation by vendors and managers in the tourism industry to improve decision making in increasing motivation and creating more differentiated night market identities, focusing not only on their traditional commercial benefits but also on brand equity. Managers should pay special attention to customer satisfaction. Many night market firms should be aware that customer satisfaction could give them a prime competitive advantage. Therefore, this approach enhanced the precision of the multi-criteria decision making process of the night market development in the tourism industry

while integrating their benefits and their customers' motivation to get the most from their brand equity and satisfy tourists.

5.2. Theoretical and managerial implications

Our findings make several contributions to the research on local tourism. For example, the identification of critical dimensions offers important directions for night market vendors and managers wishing to attract customers' purchase intention and increase their satisfaction. In the tourism industry, the critical attributes of night market customer satisfaction development are connected to and interact with other attributes. Therefore, through the analysis and identification of those critical attributes, we describe the relationships among the key satisfaction factors and the rankings for the strategy development of brand equity, benefit, motivation and customer satisfaction improvement in the tourism industry.

Moreover, the results lead us to propose a management approach consisting of strengthening night market tourism development through management of brand equity, benefits, motivations and satisfaction, in accordance with an integrated and coherent development strategy. The findings of experts and scholars with regard to the relationships among the sub-dimensions have several implications for night market vendors and managers. This study recommends the establishment of a state Department of Economic Development (DED), a Department of Information and Tourism (DIT) and a Night Market Tourism Development Association (NMTDA) to understand the relationship between brand equity and customer satisfaction.

This study concludes that the results of this study could show that in the development of the tourism night market brand policy, the DED and DIT should be considered the opinions of all parties. DANP analysis found that experts believe that tourism policy makers should protect and promote local culture and provide benefits for tourists and local suppliers. The tourism night market is a convenient place for visitors to experience local culture. Therefore, this study suggests that policy makers use the local culture to enhance brand equity. More people with professional backgrounds in tourism should participate in policy planning and persuade stakeholders to support the brand equity development of night markets.

The uncertainty and social-distancing restrictions that followed the outbreak of COVID-19, caused a sharp fall in the number of visitors and travel to popular places. The results of this study therefore indicate that operators of night markets must prioritize the benefit to their consumers over using brand equity to improve customer satisfaction. Customers' health and safety is the most important benefit during the epidemic, such as reducing interactions that require physical contact with people, keeping social distancing, and preventing virus transmission through partitions in seating arrangements (Lu et al., 2020). In addition, through online social media to maintain and contact with consumers, change the business model of operation such as through online ordering, take-out, and delivery for a business transaction (Kim, Kim, Wang et al., 2021; Yang et al., 2020), and pay attention to the health and safety of employees and customers to grasp the development of the epidemic, and finally ensure that customers understand the determination of enterprise to attach importance to epidemic prevention so that consumers have more motivation to go to the night market (Kim, Kim, Wang et al., 2021). As above, reflecting the customers' benefit and understanding the motivation of consumers during the epidemic, may help tourist night market operators turn this crisis into new business opportunities.

The results of this study provide a comprehensive and extensive view of the relationship of brand equity dimensions for the development of Taiwan's tourism night market. A consensus of experts in industry, government and academia could help decision makers understand the impact of policy-related dimensions and develop policy decisions that stakeholders will recognize.

5.3. Limitations and directions for future research

Despite its numerous contributions to the field, this study has several limitations. Although opinions from experts lent meaning to tourism strategy making (Liu, Tzeng, & Lee, 2012), previous studies have suggested that customers and employees may have differing views of the service recovery effort (Eid & El-Gohary, 2015). Because both night market vendors and service customers assign attributes to their service encounters, future researchers may wish to compare the viewpoints of contract employees and customers.

In addition, this study investigates the critical attributes of night market tourism according to experts' experience but without considering the cultural effects. Yang and Mattila (2013), page state that "there is a dire need for more cross-cultural research in both satisfaction and service recovery." Thus, this study reveals how experts with different cultural backgrounds respond to local tourism development, and could help multinational tourism organizations manage service encounters better.

We chose experts specializing in night market research, resource allocation, planning and management. The research consisted of several stages. In the first stage, we evaluated and analyzed tourism benefit, motivation, brand equity, marketing strategy and satisfaction, and other concepts. We invited three experts to clarify ambiguities and complete the original questionnaire. In the second stage, we selected experts who had worked in night market operation, resource allocation or research. They averaged 11.37 years of experience in planning or researching night market tourism, and their average age was 41.80 years. However, in this study, the classification of the night tourist market has not been explained in more detail.

Future studies could use classification of the night tourist market that might affect attractions for diverse tourists or visitors. A variety of night markets with unique types of clothing, jewelry and accessories not only affects tourists' motivation and satisfaction, but also explains the implementation and evaluation of tourism development.

Taken together, the results of this research may help the Taiwanese government and entrepreneurs tailor a promotion strategy to certain markets (Lee & Chien, 2008). For example, night markets that can offer cultural experiences, novel and interesting activities, fashionable clothing and products, and diverse cuisine will attract visitors from Taiwan and abroad. The Taiwan Tourism Bureau could promote Taiwan's distinctive local foods and beverages to overseas tourists using brand equity, encourage a travel motivation strategy, or use a different marketing strategy. Some benefits may accrue from night market development, such as the protection of Taiwan's culture, and increased profits for local suppliers and protectors. However, the primary benefit not only arises from strengthening the image of night markets as representative of Taiwan's attractions but is also helpful in local economic growth and development.

Author statement

Chih-Hsing Sam Liu: Conceptualization, Investigation. Data curation, Software, Writing- Original draft preparation. Writing- Reviewing and Editing.

Sheng-Fang Chou: Methodology, Software, Visualization, Writing- Original draft preparation. Writing- Reviewing and Editing.

Jun-You Lin: Supervision, Writing- Original draft preparation. Writing- Reviewing and Editing.

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary material related to this article can be found, in the online version, at doi:<https://doi.org/10.1016/j.evalprogplan.2021.101961>.

References

- Aggarwal, P. (2005). Role of relationship norms in processing brand information. *The Journal of Consumer Research*, 32(3), 453–464.
- Alonso, A. D., & Bressan, A. (2014). Expanding the scope of traditional rural products through events, tourism and hospitality. *Food and Wine Events in Europe: A Stakeholder Approach*, 85.
- Baloglu, S., Henthorne, T. L., & Sahin, S. (2014). Destination image and brand personality of Jamaica: A model of tourist behavior. *Journal of Travel & Tourism Marketing*, 31(8), 1057–1070.
- Belton, V., & Stewart, T. (2002). *Multiple criteria decision analysis: An integrated approach*. Dordrecht: Kluwer Academic Publishers.
- Béné, C. (2020). Resilience of local food systems and links to food security—A review of some important concepts in the context of COVID-19 and other shocks. *Food Security*, 1–18.
- Beristain, J. J., & Zorrilla, P. (2011). The relationship between store image and store brand equity: A conceptual framework and evidence from hypermarkets. *Journal of Retailing and Consumer Services*, 18(6), 562–574.
- Blain, C., Levy, S. E., & Ritchie, J. B. (2005). Destination branding: Insights and practices from destination management organizations. *Journal of Travel Research*, 43(4), 328–338.
- Boniface, P. (2013). *Managing quality cultural tourism*. Routledge.
- Boo, S., Busser, J., & Baloglu, S. (2009). A model of customer-based brand equity and its application to multiple destinations. *Tourism Management*, 30(2), 219–231.
- Carayannis, E., Ferreira, J., Jalali, M., & Ferreira, F. (2018). MCDA in knowledge-based economies: Methodological developments and real-world applications. *Technological Forecasting and Social Change*, 131, 1–3.
- Chang, J., & Chiang, C. (2006). Segmenting American and Japanese tourists on novelty-seeking at night markets in Taiwan. *Asia Pacific Journal of Tourism Research*, 11(4), 391–406.
- Chang, J., & Hsieh, A. T. (2006). Leisure motives of eating out in night markets. *Journal of Business Research*, 59(12), 1276–1278.
- Chen, C. F., & Chen, F. S. (2010). Experience quality, perceived value, satisfaction and behavioral intentions for heritage tourists. *Tourism Management*, 31(1), 29–35.
- Chen, H., Huang, X., & Li, Z. (2020). A content analysis of Chinese news coverage on COVID-19 and tourism. *Current Issues in Tourism*, 1–8. <https://doi.org/10.1080/13683500.2020.1763269>
- Chen, C. A., Lee, M. H., & Yang, Y. H. (2012). Branding Taiwan for tourism using 'decision making trial and Evaluation Laboratory' and 'Analytic Network Process' methods. *Service Industries Journal*, 32(8), 1355–1373.
- Chen, C. C., Petrick, J. F., & Shahvali, M. (2014). Tourism experiences as a stress reliever examining the effects of tourism recovery experiences on life satisfaction. *Journal of Travel Research*, Article 0047287514546223.
- Chuang, A., Hsu, S., Wang, A. C., & Judge, T. (2014). Does west "fit" with east? In search of a Chinese model of person-environment fit. *The Academy of Management Journal*.
- Eid, R., & El-Gohary, H. (2015). The role of Islamic religiosity on the relationship between perceived value and tourist satisfaction. *Tourism Management*, 46, 477–488.
- Gómez, M., & Molina, A. (2012). Wine tourism in Spain: Denomination of origin effects on brand equity. *International Journal of Tourism Research*, 14(4), 353–368.
- Hess, J., Story, J., & Danes, J. (2011). Service climate, employee commitment and customer satisfaction: Evidence from the hospitality industry in China. *International Journal of Contemporary Hospitality Management*, 23(5), 592–607.
- Ho, C. Y., Tsai, B. H., Chen, C. S., & Lu, M. T. (2021). Exploring green marketing orientations toward sustainability the hospitality industry in the COVID-19 pandemic. *Sustainability*, 13(8), 4348.
- Hornig, J. S., Liu, C. H., Chou, H. Y., & Tsai, C. Y. (2012). Understanding the impact of culinary brand equity and destination familiarity on travel intentions. *Tourism Management*, 33(4), 815–824.
- Hornig, J. S., Liu, C. H., Chou, S. F., Yin, Y. S., & Tsai, C. Y. (2014). Developing a novel hybrid model for industrial environment analysis: A study of the gourmet and tourism industry in Taiwan. *Asia Pacific Journal of Tourism Research*, 19(9), 1044–1069.
- Hornig, J.-S., Liu, C.-H. S., Chou, S.-F., Tsai, C.-Y., & Hu, D.-C. (2018). Developing a sustainable service innovation framework for the hospitality industry. *International Journal of Contemporary Hospitality Management*, 30(1), 455–474.

- Hsu, H.-M. (2016). *Night market guide*. Taipei: Published by Taipei city Market Administration Office.
- Huang, T. T. (2021). *Shilin Night Market in Taipei struggles to find way out of COVID slump*. Liberty Times. <https://www.taiwannews.com.tw/en/news/4150431>.
- Huang, Z. J., & Cai, L. A. (2015). Modeling consumer-based brand equity for multinational hotel brands—When hosts become guests. *Tourism Management*, *46*, 431–443.
- Huang, C. E., & Liu, C. H. (2018). The creative experience and its impact on brand image and travel benefits: The moderating role of culture learning. *Tourism Management Perspectives*, *28*, 144–155.
- Hui, T. K., Wan, D., & Ho, A. (2007). Tourists' satisfaction, recommendation and revisiting Singapore. *Tourism Management*, *28*(4), 965–975.
- Iglesias, O., Markovic, S., & Rialp, J. (2019). How does sensory brand experience influence brand equity? Considering the roles of customer satisfaction, customer affective commitment, and employee empathy. *Journal of Business Research*, *96*, 343–354.
- Jones, T., & Taylor, S. F. (2007). The conceptual domain of service loyalty: How many dimensions? *Journal of Services Marketing*, *21*, 36–51.
- Kang, M., Kim, J. R., & Cha, H. (2018). From concerned citizens to activists: A case study of 2015 South Korean MERS outbreak and the role of dialogic government communication and citizens' emotions on public activism. *Journal of Public Relations Research*, *30*(5-6), 202–229.
- Kaushal, V., & Srivastava, S. (2021). Hospitality and tourism industry amid COVID-19 pandemic: Perspectives on challenges and learnings from India. *International Journal of Hospitality Management*, *92*, Article 102707.
- Keeney, R. (1992). *Value-focused thinking: A path to creative decision making*. Harvard: University Press.
- Keller, K. L. (1993). Conceptualizing, measuring, and managing customer-based brand equity. *Journal of Marketing*, *57*, 1–22.
- Kim, J. J., & Fesenmaier, D. R. (2014). Measuring emotions in real time implications for tourism experience design. *Journal of Travel Research*, Article 0047287514550100.
- Kim, J., Kim, J., Lee, S. K., & Tang, L. R. (2020). Effects of epidemic disease outbreaks on financial performance of restaurants: Event study method approach. *Journal of Hospitality and Tourism Management*, *43*, 32–41.
- Kim, J., Kim, J., & Wang, Y. (2021). Uncertainty risks and strategic reaction of restaurant firms amid COVID-19: Evidence from China. *International Journal of Hospitality Management*, *92*, Article 102752.
- Kivela, J., & Crotts, J. C. (2006). Tourism and gastronomy: Gastronomy's influence on how tourists experience a destination. *Journal of Hospitality & Tourism Research*, *30*(3), 354–377.
- Konecnik, M., & Gartner, W. C. (2007). Customer-based brand equity for a destination. *Annals of Tourism Research*, *34*(2), 400–421.
- Kuo, S. C., Shih, S. M., Chien, L. H., & Hsiung, C. A. (2020). Collateral benefit of COVID-19 control measures on influenza activity, Taiwan. *Emerging Infectious Diseases*, *26*(8), 1928.
- Lee, C. C., & Chien, M. S. (2008). Structural breaks, tourism development, and economic growth: Evidence from Taiwan. *Mathematics and Computers in Simulation*, *77*, 358–368.
- Lee, C. K., Yoon, Y. S., & Lee, S. K. (2007). Investigating the relationships among perceived value, satisfaction, and recommendations: The case of the Korean DMZ. *Tourism Management*, *28*(1), 204–214.
- Liu, C.-H. S., & Chou, S.-F. (2016). Tourism strategy development and facilitation of integrative processes among brand equity, marketing and motivation. *Tourism Management*, *54*, 298–308.
- Liu, C. H. S., & Fang, Y. P. (2016). Night markets: Entrepreneurship and achieving competitive advantage. *International Journal of Contemporary Hospitality Management*, *28*(11), 2374–2398.
- Liu, J. Y., Chen, T. J., & Hwang, S. J. (2020). Analysis of imported cases of COVID-19 in Taiwan: A nationwide study. *International Journal of Environmental Research and Public Health*, *17*(9), 3311. <https://doi.org/10.3390/ijerph17093311>
- Liu, X., Huang, D., & Li, Z. (2018). Examining relationships among perceived benefit, tourist experience and satisfaction: The context of intelligent sharing bicycle. *Asia Pacific Journal of Tourism Research*, *23*(5), 437–449.
- Liu, C. H., Tzeng, G. H., & Lee, M. H. (2012). Improving tourism policy implementation—The use of hybrid MCDM models. *Tourism Management*, *33*, 413–426.
- Lu, J., Gu, J., Li, K., Xu, C., Su, W., Lai, Z., ... Yang, Z. (2020). COVID-19 outbreak associated with air conditioning in restaurant, Guangzhou, China, 2020. *Emerging Infectious Diseases*, *26*(7), 1628.
- Mohr, K., Backman, K. F., Gahan, L. W., & Backman, S. J. (1993). An investigation of festival motivations and event satisfaction by visitor type. *Festival Management and Event Tourism*, *1*(3), 89–97.
- Oh, H., & Hsu, C. H. (2014). Assessing equivalence of hotel brand equity measures in cross-cultural contexts. *International Journal of Hospitality Management*, *36*, 156–166.
- Park, R. (2012). Cognitive and affective approaches to employee participation: Integration of the two approaches. *Journal of World Business*, *47*(3), 450–458.
- Petrick, J. F., & Backman, S. J. (2001). An examination of golf travelers' satisfaction, perceived value, loyalty, and intentions to revisit. *Tourism Analysis*, *6*(3/4), 223–237.
- Pike, S. (2005). Tourism destination branding complexity. *Journal of Product and Brand Management*, *14*, 258–259.
- Pike, S., & Bianchi, C. (2013). Destination brand equity for Australia: Testing a model of CBBE in short-haul and long-haul markets. *Journal of Hospitality & Tourism Research*, Article 1096348013491604.
- Reisinger, Y., & Turner, L. W. (2003). *Cross-cultural behaviour in tourism: Concepts and analysis*. Elsevier.
- Saaty, T. L. (1996). *Decision making with dependence and feedback: The analytic network process*. Pittsburgh: RWS Publications.
- Semeijn, J., Van Riel, A., & Ambrosini, A. (2004). Consumer evaluation of store brands: Effect of store image and product attributes. *Journal of Retailing and Consumer Services*, *11*(4), 247–258.
- Sun, Y. M., Wang, S. T., & Huang, K. W. (2012). Hygiene knowledge and practices of night market food vendors in Tainan City, Taiwan. *Food Control*, *23*(1), 159–164.
- Tosun, C., Temizkan, S. P., Timothy, D. J., & Fyall, A. (2007). Tourist shopping experiences and satisfaction. *International Journal of Tourism Research*, *9*(2), 87–102.
- Tsai, C. T. (2013). Cultural tourism and night Markets in Taiwan. *International Journal of Business and Information*, *8*(2), 247–266.
- Tsai, C. T. S., & Wang, Y. C. (2017). Experiential value in branding food tourism. *Journal of Destination Marketing & Management*, *6*(1), 56–65.
- Tsai, K. T., Lin, T. P., Hwang, R. L., & Huang, Y. J. (2014). Carbon dioxide emissions generated by energy consumption of hotels and homestay facilities in Taiwan. *Tourism Management*, *42*, 13–21.
- Tzeng, G. H., & Huang, J. J. (2011). *Multiple attribute decision making: Methods and applications*. Taylor & Francis.
- Wang, C. J., Ng, C. Y., & Brook, R. H. (2020). Response to COVID-19 in Taiwan: Big data analytics, new technology, and proactive testing. *Jama*, *323*(14), 1341–1342.
- Yang, W., & Mattila, A. S. (2013). The impact of status seeking on consumers' word of mouth and product preference: A comparison between luxury hospitality services and luxury goods. *Journal of Hospitality & Tourism Research*, Article 1096348013515920.
- Yang, Y., Liu, H., & Chen, X. (2020). COVID-19 and restaurant demand: Early effects of the pandemic and stay-at-home orders. *International Journal of Contemporary Hospitality Management*, *32*(12), 3809–3834.
- Yu, L., & Goulden, M. (2006). A comparative analysis of international tourists' satisfaction in Mongolia. *Tourism Management*, *27*(6), 1331–1342.
- Yuliantoro, N., Juliana, J., Bernarto, I., Pramono, R., & Purwanto, A. (2020). Z generation satisfaction towards food street culinary at the time of Covid 19 pandemic. *International Journal of Advanced Science and Technology*, *29*(4), 5014–5023.
- Zhang, H., Song, H., Wen, L., & Liu, C. (2021). Forecasting tourism recovery amid COVID-19. *Annals of Tourism Research*, *87*, Article 103149.

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