Development of rural accommodation selection criteria: The case of South Korea

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Introduction

Rural accommodations have become an increasingly important sector of the tourism industry (Albacete-Sáez et al., 2007; Chan and Quah, 2012; Park et al., 2014). As a result, the focus of rural accommodations has been devoted to strengthening the capacity of rural communities in light of economic perspectives (Olson et al., 2003). As a fundamental subsector of tourism, the impact of sustainable rural accommodations poses distinct advantages for rural destinations in general (Alsos et al., 2013; Fleischer and Felsenstein, 2000; Lynch et al., 2009; Montaña-ValleF, 2016). Despite the fact that rural tourism has gained popularity, operators of rural accommodation are not fully aware of how they should manage their businesses effectively (Ohe, 2008). This lack of knowledge in operation may impede the sustainability of the service sector and may hinder the potential growth of rural destinations as individual

businesses and a subsector of the tourism industry (Hong et al., 2003; Sharpley, 2002).

Previous literature asserts that cleanliness, convenience, safety, reasonable prices, and diverse services and facilities are important factors in operating various types of accommodations, such as hotels, bed and breakfasts (B&Bs), or farmstays (e.g., Fleischer and Pizam, 1997; Opperman, 1995; Pina and Delfa, 2005; Reichel et al., 2000; Zaman et al., 2016). Furthermore, it has been widely accepted that the overall quality of accommodations influences tourists' revisit intentions for rural destinations (Albaladejo-Pina and Díaz-Delfa, 2005; Hill and Busby, 2002). However, specific attributes that constitute the overall quality have been determined by unprofessional rural accommodation operators rather than by real customers (Radder and Wang, 2006). From this perspective, it is critical to evaluate which attributes in overall quality is considered

important by collecting data from actual visitors of rural accommodations (Panyik et al., 2011). With the establishment of these attribute systems, rural accommodation operators will be able to resolve conflicts with customers, which eventually result in service failure and customer dissatisfaction with accommodation facilities (Radder and Wang, 2006). Therefore, constant attention to specific attributes in quality dimension is necessary to provide a satisfactory level of service, and to stimulate repeated visits to a rural accommodation, rural destination itself, or both (Sohrabi et al., 2012).

Traditionally, a variety of analytic tools (i.e., MANOVA, logit models, confirmatory factor analysis, and conjoint analysis) have been utilized to obtain ranked data from preference analyses (e.g., Albacete-Sáez et al., 2007; Crouch and Louviere, 2004; Faruqi, 2013; Hong et al., 2003; Molera and Albaladejo, 2007; Wei et al., 1999). Unlike these existing models, the Analytic Hierarchy Process (AHP) has been regarded as a practical and versatile method for scale development because it is capable of identifying the relative importance of each alternative (Liou and Tzeng, 2007; Wind and Saaty, 1980). Moreover, the AHP is a strong method in determining which factors should be considered as a priority in a given situations (Forman and Gass, 2001). Research in hospitality and tourism accordingly suggested that the AHP is an eminent method for assessing priority attributes of service quality and evaluating the essential elements of sustainable development (Ramanathan and Karpuzcu, 2011; Tsaur and Wang, 2007; Sipahi and Timor, 2010). However, research that attempt to investigate the rural accommodation selection criteria using the AHP is scarce.

Due to the lack of research effort in evaluating each sub-attribute in overall quality dimension, this study is mainly designed to determine prominent criteria of rural accommodation selection (RAS) by using the AHP. To reach this purpose, the current study implements significant domains of service attributes within rural accommodation selection. Specifically, this study aims (1) to synthesize the previous findings of measures of selection attributes related to accommodations and (2) to identify a conjecture framework regarding the RAS

criteria in the application of the AHP. Based on the findings of empirical analysis, the current study discusses conclusions, implications, and suggestions for future research.

Literature Review

The Significance of Rural Accommodations to Tourism

Previous literature has addressed how rural tourism matters to the cross-country development of a broad range of service activities (Barke, 2004; Molera and Albaladejo, 2007; Park and Yoon, 2009; Thompson, 2004). Among the various types of service activities related to rural tourism, establishing a service structure of rural accommodations plays a significant role in determining tourists' satisfaction with a destination (Park et al., 2014). Despite its attested significance, the terminology of rural accommodation is rarely used in tourism. One recent study has described rural accommodation as a unique category of lodging facilities that includes B&Bs, rural hotels, rented homes, and campsites (Albacete-Sáez et al., 2007). In fact, the idiosyncrasy of rural accommodations as compared to other types of lodging seems to be a well-known fact. Yet the fact remains that with the emergence of sustainable destination development (Sharpley, 2000), rural accommodations are crucial for rural residents as well as destination managers (Crotts and Holland, 1993).

With this significance in mind, a general attempt to reinforce rural tourism has taken place. However, previous attempts remained as examining rural tourism as a whole even though unique service activities are critical in fostering the root for entire rural tourism (Panyik et al., 2011). Specifically, instead of paying extensive attention to the quality of rural tourism as a whole, the quality of service attributes of rural accommodations (i.e., a subsector of rural destination) should be considered more important because these specific dimensions exert stronger influence on tourists' satisfaction as well as their intention to revisit the destination (Fleischer and Tchetchik, 2005).

In reality, rural residents with family-based entrepreneurs often involve in rural tourist

accommodation operations (Clarke, 1995). This widespread activity contributes to enhancing the quality of life of rural households (Evans and Ilbery, 1989) and to alleviating low-income households (Cánoves et al., 2004), implying that developing rural accommodation facilities can be a necessity for rural households (McGehee et al., 2010). Despite the increasing number of rural accommodations across rural destinations and much to the frustration of destination managers, most family-based entrepreneurs are liable to neglect tourists' needs and wants when it comes to a rural accommodation selection criteria, which ultimately results in a service failure of the rural tourism subsector (Reichel et al., 2000). Establishing effective management planning should, therefore, be strongly recommended for rural tourist accommodations, specifically regarding appropriate internal investment decisions. As a result, such planning can be followed as a practical management guideline for rural accommodation operators (Albladejo-Pina and Díaz-Defa, 2009). In effect, efforts to optimize rural accommodation operations will likely not only help local residents to generate secondary incomes but also develop the sustainability of rural destinations.

Rural Accommodation Selection (RAS) Criteria

Over the past few decades, a growing body of literature has adopted and/or revised existing measurement scales used to evaluate the importance and expectedness of service-related attributes among accommodations. The rural accommodation sector has responded by implementing requirements for the development of the service attributes listed in its selection criteria due to the development's potential impact on small-business success as well as the general vitality of rural destinations as a subsector (Fleischer and Pizam, 1997; Reichel et al., 2000). Meanwhile, the scarcity of recent studies on rural accommodations clarifies the necessity to develop criteria of RAS with finely-tuned measurement scales used to assess other types of accommodations.

Studies have nominated several prominent and specific service attributes as the likeliest to influence guests' satisfaction, loyalty, and

choice. Choi and Chu (1999; 2001) suggested that the hotel industry should specifically attend to following attributes: staff service quality, room quality, general amenities, business service, and security. That same year Wei et al. (1999) prioritized different attributes of successful hotel businesses, such as price, location, facilities, restaurant(s), furnishings, front desk, and staff attitude. Other studies have variously spotlighted the following attributes of successful hotels: cleanliness, service quality, overall feeling, safety, food price and quality, cleanliness, bathroom facilities, good reputation, reservations system, location, price, courteous and polite staff, and staff knowledge, among others (Cadott and Turegon, 1988; Callan and Bowman, 2000; Radder and Wang, 2006).

Still others argue that what matters is the salience of service attributes, such as overall service quality (Benítez et al., 2007; Pina and Delfa, 2005; Wang et al., 2007), well-trained staff members (Faruqui, 2013), cleanliness (Lockyer, 2002), pricing strategies (Sheridan et al., 2013), and the efficacy of reservation systems, facilities, location, and external environment (Otegbulu and Tenigbade, 2011). In a study focused specifically on hotel selection, Lockyer (2005) specifically points to the attributes or criteria of cleanliness, safety/security, room convenience, staff attitude, facilities (e.g., bathrooms and spas), price, parking, convenience related to destination site, food and beverage services, internal deco-ambiance, good reputation, room size, food-service efficiency, star rating of the motel/hotel, and flexible desk hours. Another strain in the literature nominates attributes related to convenience and comfort as primary hotel selection factors, which include cleanliness, price, comfort, security and protection, network services, pleasure, staff and their services, room comfort, expenditure, room facilities, and car parking (Chan and Wong, 2006; Lockyer, 2002; Sohrabi et al., 2012). As all of these studies together make clear, there is an array of attributes that successful accommodation operators have prioritized.

Several studies have compared aforementioned attributes for hotel selection to RAS

attributes in order to stress the importance of each attribute in improving the often-unprofessional operations of rural accommodations. For instance, both Fleischer and Pizam (1997) and Reichel et al. (2000) have identified selection criteria of rural accommodations, such as farmstays, or homestays, corresponding to the selection criteria used for hotels. Their results consistently argue that prominent attributes are room cleanliness, restroom cleanliness, room size, owners' business expertise, internal deco-ambience, internal facilities, reasonable prices, reservation systems, and food safety. Particularly for homestays, Hsu and Lin (2011) have identified the following attributes as essential criteria – activities arrangement, quality of services, attractiveness of scenery, social responsibilities and facilities, prices, sanitation and comfort, novel appearance, possibility of experiencing leisure and relaxation, and availability of transportation. Though diverse, the salience of service-related attributes in other types of lodging can distinguish the RAS criteria to focus on for this study.

Application of the AHP

Saaty (1980, 1988) developed the framework of AHP based on a mathematical system used as a decision-making tool for multi-objective analysis. Since its publication, the AHP has been implemented to resolve unstructured problems pertaining to multiple criteria characteristics (Yang and Huang, 2000), as well as to simulate decision-making for a variety of situations in hospitality and tourism (Chow and Luk, 2005; Lin and Wu, 2008; Liou and Tzeng, 2007; Min and Min, 1996; Ramanathan and Karpuzcu, 2011; Yoon and Im, 2005). The chief advantage of using the AHP is its suitability for both quantitative and qualitative analysis for service priorities (Saaty, 1988). This method also permits users to formulate the weighted priority of criteria and alternatives in light of respondents' judgments. Application of the AHP thus allows DMOs not only to recognize salient attributes of RAS for certain destinations but also to help to determine an appropriate positioning strategy for an accommodation's service performance in competitive markets (Gleich et al., 2008).

Method

Types of Rural Accommodation

Three criteria were used to define an accommodation facility as rural accommodation: they should (1) be located in a rural area, (2) be owned by rural residents, and (3) contain basic infrastructure as part of tourist accommodation facilities (e.g., beds, breakfast, and restroom) but not sophisticated facilities (e.g., gym, sauna, and gift shop). According to Albacete-Sáez et al. (2007), rural accommodations can thus be categorized as several types, each of them an industry subsector: houses offering bed(s) and breakfast, rural hotels/motels, rented homes, and campsites. However, due to the fact that rural hotels, rented homes, and campsites are not often owned by rural residents and may offer sophisticated facilities, this study focuses only on rural houses offering bed(s) and breakfast to identify RAS attributes for the AHP.

Sample Selection

Since this study aims to determine RAS attributes by utilizing the AHP, it was necessary to develop a questionnaire that implements the form of the AHP (i.e., pairwise comparison) based upon previous accommodations studies. Due to the complicated nature in answering questions followed by the AHP, collecting and recording data correctly is as important as constructing a questionnaire. In order to gather accurate data, we employed 12 survey teams of 24 surveyors each from the Department of Tourism and Hospitality at a university and were subsequently trained for this study's purposes. As a sampling technique, cluster sampling was utilized by considering a fixed sample size ($n=300$), which is useful for not only targeting heterogeneous groupings but also expecting homogeneity between cluster means. Questionnaires were randomly distributed to respondents who had reportedly spent at least one night at twelve rural villages from May to August 2013 in southeastern South Korea. We chose to concentrate our data collection on the rural Korean-style villages of Suncheon Bay to form a contained sample, because rural accommodations in Suncheon Bay were known to seek development. To ensure respondent appropriateness for the sample, respondents

were asked to answer that they had stayed in rural accommodation facilities. Of the 300 questionnaires distributed, 267 (89%) were included for data analysis. 33 (11%) were excluded due to response error (e.g., all returned only middlemost answers) or missing values. The response rate of 89% indicated sample-size appropriateness for this study's empirical analysis.

Applying the AHP

This study applies the AHP to integrate different measures into a single overall score that can be used to rank several decision alternatives based on pairwise comparison choices in a series of tradeoffs (Ngai, 2003). To better evaluate how respondents ranked attributes in RAS, the questionnaire included 21 pairwise attributes for comparison. To reduce confusion and the possibility of bias stemming from misunderstanding what each attribute signified, we provided respondents with explanations of each attribute. Following the traditional AHP approach suggested by Saaty (1980), respondents were asked to select corresponding numerical values based on the attribute's relative importance for RAS. Questionnaires adopted a 9-point relational scale of importance ranging from one (i.e., the two attributes are equally important) to nine (i.e., the first attribute is absolutely more important than the second). More detailed descriptions of the measurement scales are provided in Table 1.

Developing the AHP Construct

This study designated a case of rural

accommodation in a rural destination in South Korea to evaluate how a respondent ranks attributes influencing RAS. Based on literature regarding how to determine attributes in diverse accommodation sectors, this study developed 30 selection criteria often evaluated in the lodging industry. To confirm these criteria's suitability for evaluating rural accommodations in rural destinations or nearby, this study conducted interviews with professors and rural accommodation operators. After rewording inappropriately described attributes and filtering out irrelevant attributes to RAS, 21 sub-attributes were used to construct a hierarchical structure of three levels—i.e., overall goal, factors, and sub-attributes—within the domain of rural accommodation (Table 2). The first level consisted of an evaluation structure for RAS with local and global weights corresponding to criteria. At the second level, service attributes based on previous studies served as factors and included cleanliness, basic demand, price, safety, rural environment, personal response and tangible elements. Each of these factors at the second level is associated with a set of sub-attributes included at the third level.

The seven factors each envelope three of the 21 service sub-attributes included at the third level; cleanliness includes the cleanliness of internal facilities (CL1), the cleanliness of linen (CL2), and the cleanliness of external environment (CL3); basic demand includes convenience relative to accommodation site (BD1), accessibility of the reservation system (BD2), and usability of complementary facilities

Table 1. Application of Paired Comparisons using the AHP Scale

Intensity of Importance	Determination and Explanation
With respect to your previous experience of the rural accommodation,	
1	Two attributes are equally important
3	The former attribute is weakly more important than the latter one
5	The former attribute is strongly more important than the latter one
7	The former attribute is much strongly more important than the latter one
9	The former attribute is absolutely more important than the latter one
2,4,6, and 8	Middle value for above conditions
Reciprocal of above nonzero numbers	If an attribute has one of the above numbers assigned to it when compared with a second attribute, then the second attribute has the reciprocal value when compared to the first

Note: Adapted from Saaty (1980) and Xie (2011).

Table 2. Summary of Rural Accommodation Selection (RAS) Criteria*

Author(s)		Attributes in RAS																											
		Basic												Authentic (rural)															
		Cleanliness				Demand				Price				Safety				Environment				Personal Response				Tangible Elements			
		CL 1	CL 2	CL 3	CL	BD 1	BD 2	BD 3	BD	PR 1	PR 2	PR 3	PR	SA 1	SA 2	SA 3	SA	AE 1	AE 2	AE 3	AE	SE 1	SE 2	SE 3	SE	TE 1	TE 2	TE 3	TE
Fleischer et al. (1993)	0	0	0			0															0								
Lewis (1984)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					0	0	0						
Cadott and Turegon (1988)	0	0	0																		0								
Min & Min (1996)	0	0	0	0			0	0	0	0	0										0	0	0	0	0	0	0	0	
Fleischer & Pizam (1997)	0	0	0	0		0	0	0		0											0				0	0	0	0	
Choi & Chu (1999)													0	0	0	0	0	0	0	0						0	0	0	
Wei et al. (1999)					0			0	0	0	0									0						0	0	0	
Callan & Bowman (2000)	0	0	0								0	0	0	0	0	0					0		0						
Reichel et al. (2000)	0	0	0			0					0										0				0	0	0	0	
Lockyer (2005)	0	0	0	0	0					0	0	0								0					0	0	0	0	
Pina & Delfa (2005)	0	0	0																						0	0	0	0	
Chan & Wang (2006)					0			0	0	0	0										0								
Radder & Wang (2006)	0	0	0																		0								
Albacete-Sáez et al. (2007)					0	0	0														0	0	0	0	0	0	0	0	
Hsu & Lin (2011)	0	0	0	0	0			0	0	0	0			0				0	0		0			0					
Jamal et al. (2011)								0	0	0	0							0			0								
Otegbulu & Teiniqbade (2011)					0																			0					
Sohrabi et al. (2012)	0	0	0			0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				0	0	0	0	
Faruqui (2013)							0																	0	0	0	0	0	

Items used in this study were developed by modifying the items of service quality and attributes suggested by previous studies in the context of rural accommodation, hotel, farm-stay, etc.

Figure 1. The AHP Construct in Goal, Factors, and Sub-attributes

(BD3); price includes regulated price (PR1), discounted room rate (PR2), and value for money (PR3); safety includes safety of devices/facilities (SA1), safety of surrounding area (SA2), and security for individual rooms (SA3); rural environment includes availability of rural tourism attractions (AE1), availability of traditional entertainment venues (AE2), and availability of authentic restaurants (AE3); personal response includes staff attitude towards customers (SE1), attention to children's activities in a personalized manner, (SE 2), and sympathetic handling of complaints (SE3); and tangible elements include internal deco-ambiance (TE1), auxiliary facilities (TE2), and room size (TE3). Altogether, a hierarchy of factors emerges (Figure 1).

Results

The Weight of Evaluation Factors and Sub-Attributes

After constructing the three levels of the hierarchy, the relative importance of attributes was determined by a prioritization procedure at each level. The set of pairwise comparison matrices was used to generate local weights (i.e., weighted priority) that express the relative importance of the set of attributes, which correspond to a factor at the second level. In turn, a series of pairwise comparisons of attributes was used to produce vectors of weights by unifying the result. The geometric mean was then determined in order to aggregate the pairwise comparisons for all samples. Finally, the consistency ratio of each matrix, the relative local weight score, and the

relative global weight score of the sub-attributes were computed using MS Excel as described in the following subsection.

Consistency Test

Within the framework of the AHP, using a consistency ratio (denoted as CR) enables decision-makers to detect judgments regarding comparisons. In this study we followed matrix A suggested by Saaty (1980) and Xie (2011) that represents factor importance: $A_{nn} = (a_{ij})_{nn}$ ($i = 1, 2, \dots, n; j = 1, 2, \dots, n$). There are seven specific estimation steps.

- 1) Estimating the priority of each factor (P_i) by following three sub-steps:
 - i. multiply the n elements in each row in the intensity importance matrix by each other to yield index (A_i);
 - ii. take the n^{th} root of A_i for each row to

produce the index of (B_i);

- iii. normalize by dividing each number (B_i) by the sum of all the numbers to obtain vector P_i ;
- 2) Determining the vector F_i by multiplying $A_{n \times n}$ by P_i ;
- 3) Yielding the vector C_i by dividing F_i by P_i ;
- 4) Finding the maximum Eigen value ($\lambda_{\max}$) by combining C_i and dividing by n ;
- 5) Estimating the consistency index $CI = (\lambda_{\max} - n) / (n - 1)$;
- 6) Obtaining the random index (RI) for the number of factors used at the hierarchy's second level;
- 7) Obtaining the consistency ratio $CR = CI / RI$.

As a result, CR values are allowable for ranging from 0.01 to 0.04 (Figure 3); all CR values are lower than 0.1, thus judgments are

Table 3. Consistency Test for Rural Accommodation Selection (RAS) Factors

Level	Consistency Ratio ^a	Consistency Test
Overall Goal	0.01 < .1	Accepted
Factors		
Cleanliness	0.01 < .1	Accepted
Basic Demand	0.01 < .1	Accepted
Price	0.00 < .1	Accepted
Safety	0.04 < .1	Accepted
Authentic Environment	0.00 < .1	Accepted
Personal Response	0.00 < .1	Accepted
Tangible Elements	0.00 < .1	Accepted

Note: Overall consistency ratio = 0.00

consistent (Satty and Kearn, 1985). Altogether, these results suggest this study's high consistency and accuracy regarding pairwise comparisons using computed weights.

Identifying Important RAS Criteria

The results of local weights regarding factors show that that price (0.197), cleanliness (0.195), and tangible elements (0.146) are the three most important factors during RAS (Figure 2) and are followed by safety (0.137), rural environment (0.116), and personal response (0.109). The factor of "basic demand" (0.100) appears to be least important. Consequently, rural accommodations offering clean, affordable facilities give tourists the warmest welcome (Figure 2).

Weights of Sub-Attributes at the Third Level

Within the seven factors of cleanliness, basic demand, price, safety, rural environment, personal response, and tangible elements, the sub-attributes of "the cleanliness of linen" (0.475), "convenience relative to

accommodation site" (0.450), "value for money" (0.475), "safety of devices/facilities" (0.453), "availability of authentic restaurants" (0.409), "staff attitude towards customers" (0.444), and "auxiliary facilities" (0.392) were found to be most important to each factor, respectively (Table 4).

Ranking Orders of Sub-Attributes according to Global Weight Scores

The relative importance of sub-attributes was estimated and ranked based on global weight scores (Table 4). Specifically, global weight scores were calculated by multiplying the local weight score of each factor (e.g., cleanliness = 0.195) included at the second level and the local weight scores of the corresponding sub-attributes (e.g., the cleanliness of internal facilities, 0.375; the cleanliness of linen, 0.475; and the cleanliness of surrounding area, 0.150). The results showed that "value for money" (0.094), "the cleanliness of linen" (0.093), "the cleanliness of internal facilities" (0.073), "safety of devices/facilities" (0.062),

Note: *R= Ranking

Figure 2. The Weights of Factors

Table 4. *Local and Global Weights for Each Criterion*

Factors (A)	Sub-Attributes (B)	Local Weights ^b	Global Weights ^c	Ranking
Cleanliness (0.195) ^a	(CL1) The cleanliness of internal facilities	0.375	0.073	3
	(CL2) The cleanliness of Linen	0.475	0.093	2
	(CL3) The cleanliness of surrounding area	0.150	0.029	19
Basic Demand (0.100)	(BD1) Convenience relative to rural accommodation site	0.450	0.045	11
	(BD2) Accessibility of the reservation system	0.189	0.019	21
	(BD3) Usability of complementary facilities	0.361	0.036	16
Price (0.197)	(PR1) Regulated price	0.258	0.051	7
	(PR2) Discount room rate	0.267	0.053	6
	(PR3) Value for money	0.475	0.094	1
Safety (0.137)	(SA1) Safe devices/facilities	0.453	0.062	4
	(SA2) Safety and security of surrounding area	0.306	0.042	13
	(SA3) Security for individual rooms	0.241	0.033	17
Rural Environment (0.116)	(RE1) Availability of rural tourism attractions	0.316	0.037	15
	(RE2) Availability of traditional entertainments	0.275	0.032	18
	(RE3) Availability of Authentic restaurants	0.409	0.047	9
Personal Response (0.109)	(PR1) Staff attitude towards customers	0.444	0.048	8
	(PR2) Attention to Children's activities	0.197	0.021	20
	(PR3) Sympathetic handling of complaints	0.359	0.039	14
Tangible Elements (0.146)	(TE1) Internal décor-ambiance	0.288	0.042	12
	(TE2) Auxiliary facilities	0.392	0.057	5
	(TE3) Room size	0.320	0.047	10

a. Local weight of Factor (A)

b. Local weight is derived from judgment with respect to a single criterion

c. Global weights for each sub-attributes = local weight of Factor (A) × local weight of Sub-Attributes (B)

and “auxiliary facilities” (0.057) were the five top-ranked sub-attributes. By contrast, “security for personal space” (0.033), “availability of traditional entertainment venues” (0.032), “the cleanliness of surrounding area” (0.029), “attention to children’s activities” (0.021), and “accessibility of the reservation system” (0.019) were the five least-ranked sub-attributes. Respondent’ valuations for the relative importance of key factors and sub-attributes may come from their experience with rural accommodation facilities (Albacete-Saez et al., 2007).

Discussion

This study has focused on developing rural accommodation selection criteria by using service-related attributes of diverse accommodations following the AHP to clearly confirm a hierarchy of service attributes of RAS. Identifying tourist RAS criteria should contribute to directing high-risk investments by rural destination developers and accommodation operators. Although destination

management organisations (DMOs) have financed family-based entrepreneurs to revamp their old-fashioned houses and/or establish a new type of rural accommodation, such activity has occurred without recognizing tourist needs and wants when they select rural accommodations. The AHP was thus considered as the most applicable approach to develop crucial RAS criteria based on the importance of each service attribute. In effect, this study aims to contribute to facilitating multi-criteria decisions and to demonstrate how the AHP applies to hospitality and tourism.

Empirical analysis with the AHP model revealed that the model was suitable for producing a three-level hierarchy process to simulate RAS according to 21 sub-attributes classified into seven factors (i.e., cleanliness, basic demand, price, safety, rural environment, personal response, and tangible elements). Regarding the relative priority of factors at the second level of the AHP model, the findings of this study reveal that price is the most

important criteria, while convenience is the least important one. Meanwhile, this study's findings are relatively consistent with previous research in that price matters most when selecting a hotel (e.g., Cobanoglu et al., 2003) as well as an informal accommodation (Guttentag, 2015). The results are also consistent with the findings of existing literature proposing the salience of tangible elements (e.g., Albacete-Sáez et al., 2007; Callan & Bowman, 2000; Wei et al., 1999) and cleanliness (e.g., Lockyer, 2003; Radder and Wang, 2006; Zaman et al., 2016) as customers' major priorities when they select general accommodation facilities.

Upon ranking sub-attributes at the third level, salient attributes relative to key factors reveal high priority, including: "the cleanliness of linen" for cleanliness; "convenience related to rural accommodation site" for basic demand; "value for money" for price; "safety of devices/facilities" for safety; "availability of authentic restaurants" for rural environment; "staff attitude towards customers" for personal response; and "auxiliary facilities" for the tangible elements factor. Findings based on global weight scores indicate that the importance of each service attribute varies depending on the tourist perceptions reported in the rankings (Table 4). RAS criteria should thus be distinguished compared to that of other lodging facilities (e.g., urban hotels). Once isolated rural accommodations should concentrate their efforts of improvement on value, cleanliness of linen, cleanliness of internal facilities, safety of devices/facilities, and auxiliary facilities. Given these findings, the proper diversification of service attributes of rural accommodations will differ according to the hierarchical importance vis-à-vis priority as perceived by tourists.

Indeed, our study provides significant implications from methodological and managerial perspectives. On the one hand, findings suggest that the AHP can identify prominent RAS criteria that allow DMOs to create a useful guideline for their support of rural accommodation operators. As the number of rural accommodations increases, utilization of the AHP can provide reliable analysis on tourist preferences and the relative importance

of specific service attributes of rural accommodations. Furthermore, the AHP method furthermore allows users to solve complex multi-criteria problems by consulting a hierarchy that ranks the significance of these RAS criteria. As a result, the method helps to integrate the evaluations of actual or potential tourists regarding existing and potential types of rural accommodations (e.g., campsites and RV parks), as well as demonstrates the applicability of decision-making models to travel destinations in respect to medical tourism, slow tourism, and sustainable tourism.

Managerial implications

Additionally, this study offers implications for management. First, findings indicate that tourists are sensitive to the price and cleanliness in RAS. Since rural accommodation facilities appear to be operated as a second job of rural resident homeowners, pricing and maintenance level can vary. Based upon the evaluations of actual visitors, DMOs should issue managerial rules regarding both the optimal price of facilities according to seasonality and the facility maintenance and overall sanitarianess. DMOs should then devise educational systems to disseminate their guidelines among rural accommodation operators. Second, findings can particularly assist DMOs pursuing sustainable development by targeting rural accommodation visitors. For example, if DMOs emphasize the priority of significant attributes relative to key factors (e.g., linen cleanliness, convenience related to accommodation location, and value for money), they can then strategize how to fulfill tourist needs and wants in RAS for specific destinations. Third, the periodic implementation of market analyses using the AHP may help each rural destination to fine-tune their managerial rules for rural accommodation operators. Lastly, creating public relations outlets by offering travel brochures and appearing on travel-oriented TV programs, among others, should be pursued in order to convince potential tourists to trust rural accommodation facilities in light of their price and cleanliness. Altogether, potential tourists to rural destinations must be convinced to overcome their suspicions of rural accommodations and their operators; this study ultimately proposes that operators and DMOs

apply our findings to improve the pricing and maintenance of rural accommodations as part of a general effort to sustain rural tourism.

Limitations and suggestions for future research

Despite these significant implications, our study reveals several limitations. First, it fails to consider socio-demographic characteristics, thus future studies should identify whether the preferential differences of respondents regarding RAS criteria depend on socio-demographic variables, such as gender, income, age, and family situation, among other. Second, this study limits its attention to only one type of rural accommodation (i.e., houses offering bed-and-breakfast services). We thus recommend that future studies evaluate other types of rural accommodations using the same method as our study. Lastly, only domestic tourists visiting a single part of a country (i.e., southeastern South Korea) constituted this study's sample, which presumably limited the possibility of our generalizing our findings. To overcome this limitation, future studies should identify whether international tourists have different criteria in RAS.

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