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SUCCESS CRITERIA FOR THE COMMUNITY-BASED RURAL HOMESTAY PROGRAMME IN MALAYSIA

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This article is based on a study that was carried out to identify all the relevant success criteria for the Malaysia Homestay Programme. The purpose of the study was to come up with the criteria which can be used to evaluate the success of each of the homestay group under this programme. Once the criteria are identified, they are weighted and ranked in order to discover the priority of each of the criteria. Nine criteria were identified as the Malaysia Homestay Programme success criteria. The ranking was calculated using two methods which are Modified Pairwise Comparison method and Rank Order Centroid (ROC) method. The study established that the' 'marketing and promotion, 'organizational management and leadership', and 'responsible participation' are found as the three most important criteria while 'networking', 'maintenance' and 'publicity' are ranked as the three least important criteria.

Keywords: Sustainable development initiative, Multi-criteria approach, Rural tourism

I. INTRODUCTION

Community-based programmes are highly effective in managing natural resources, providing basic infrastructure or ensuring primary social services if they are properly designed (Narayan, 1995) and implemented. The Malaysian Government has been promoting the Homestay Programme since the 1980s. Briefly, this programme promotes communities in the rural areas in Malaysia to work together and offer visitor facilities, products and experiences from the supplies and resources which exist in their community. Besides being an alternative tourism product, The Malaysian Community-based Rural Homestay Programme was introduced with the aim to reduce income imbalances between the rural and urban areas through the creation of a new economic activity.

Since its formal introduction in the early 80s, no studies have been carried out to scrutinize the success of this programme. Is this programme successful in achieving what it is preordained to achieve? And, what are the criteria that shall promise the success of this programme? There is a dire need to investigate the underlying causes of the success and understanding the criteria that contribute to the homestay success is an important prerequisite. To date, little is known about what underlies successful homestay operations although many quarters claim that the homestay programme in Malaysia have created numerous benefits. Establishing the criteria can assist homestay managers to focus on the criteria that will attract and satisfy homestay tourists thus allowing the programme to sustain. The criteria may also guide other rural communities that are planning to join the homestay

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bandwagon in the future as they will be able to assess the potential sustainability of their initiatives.

This paper is based on a study that was carried out to identify all the relevant success criteria for the Malaysia Homestay Programme. The purpose of the study was to come up with a ranked success criteria which can be used by the operators to rate their services and to promote their homestays. Ratings on these criteria will allow them to improve their services in order for them to attract more visitors and generate more income.

II. LITERATURE REVIEW

(A) Malaysia Homestay Programmes and Sustainable Development

The Malaysia Homestay Programme is a strategy towards diversifying Malaysia's competitive tourism products as well as to improve and develop the standard of living of the rural community through their participation in tourism business while conserving the natural and cultural resources that are available in the rural areas. This is in line with the policy statement for Ministry of Tourism and Culture (MOTAC) which is to propel competitive and sustainable tourism and culture sectors towards the socio-economic development of the country. Even before MOTAC officially promote it as a tourism product, the Malaysia Homestay Programme has already been established by the Ministry of Rural Development as a community project which was aimed to instill unity among members of the rural communities. Through these community projects, rural communities share tourism benefits while offering tourists the opportunity to experience local culture and way of life. In the 80's, Ministry of Tourism, Arts and Culture (previous name for MOTAC), began to further develop and market the rural homestay initiatives while Ministry of Rural and Regional Development also continues developing them. the homestay initiatives represent a more responsible way in tourism development where the development is undertaken by the people and for the people.

Community-based programmes such as the Malaysian Rural Homestay Programme are a success if they bring out the benefits to the community sustainably. A sustainable approach in tourism development should aim to satisfy the visitors as well as to develop the people and the place where the community lives in. Tourism development must 'develop' the economic capability of the hosts to create economic sustainability. Income generated from tourism should ideally be used at the national and local level to support education, improve infrastructure, finance conservation efforts, and to foster more responsible tourism. In that way, tourism can become a crucial strategy for sustainable development. Sustainable tourism strives to reduce economic leakages and increase economic linkages as well as to conserve the environment through effective energy use. In addition, sustainable tourism requires respect for local culture and involvement of local community in tourism development, planning and monitoring (Scheyvens, 2002).

The Homestay Programmes' actual performance that can qualify them as tools for sustainable development are still vague due to lack of research. Armstrong (2012) suggests that the principal conditions for CBT success include engagement with the private sector; a strong and cohesive host community; genuine community participation, ownership and control; planning for commercial viability; sound market research and demand-driven product development; attractive, quality products based on community assets; transparent financial management; appropriate stakeholder support and effective monitoring and evaluation. In addition, different authors posit other important criteria for the homestay programme, namely organizational management and commitment (Yusnita, Amin and Muda, 2012), leadership (Pusiran and Xiao, 2013), local community ability and capacity (Manyara and Jones, 2009), conservation of community resources (Goodwin and Santilli, 2009), marketing (Kayat, 2011), and maintenance (Adrianna, Cindy and Nor' Ain, 2007). In addition, requirements stated in the Ministry guidelines for the establishment of the homestay such as safety and attractive packages can be included as important sustainable criteria for the homestay programme. All of the abovementioned criteria are used in the formation of the sustainable homestay index this study.

(B) Multi-criteria Decision-Making Techniques

Multiple Criteria Decision Making (MCDM) is a sub-discipline of operations research that explicitly considers multiple criteria in decision making environments. It refers to making decisions in the presence of multiple, usually conflicting criteria or factors. There are two categories of MCDM problems, which are: Multiple Attribute Decision Making (MADM), and Multiple Objective Decision Making (MODM) (Saaty 1988). In MODM, several objective functions should be satisfied in the optimization problem, but in MADM, all the problems in which the set of decision alternatives have been predetermined. In other words, MADM involves making preference decisions (evaluation, prioritization, selection) over the available alternatives that are characterized by multiple, usually conflicting attributes. It is widely used for real world problems (Xu and Yager, 2006). In this study, MADM approaches were suitable since both alternative and criteria were predetermined before further analysis was carried out.

There are several methods that are often use namely the weighted sum model (WSM), Analytical Hierarchy Process (AHP), revised AHP, weighted product model (WPM), and The Technique for Order of Preference by Similarity to Ideal Solution (TOPSIS).

(C) Methodology and Results

The study consisted of three phases; preliminary study, main study and factor ranking. In the preliminary study, all the related criteria and sub-criteria were

identified from the literature, homestay operators and also from the experts' opinion. Using these identified criteria as a basis, a questionnaire was developed and face-to-face interviews were conducted using the structured questionnaire to collect data from the registered Malaysia Homestay Programme operators in the Penang, Kedah and Perlis. The list of homestay programmes issued by the Ministry was used as the sampling frame for the probabilistic selection of the sample (Table 1).

TABLE I: REGISTERED HOMESTAY PROGRAMMES IN PERLIS, KEDAH AND PENANG

No.	*State*	*Homestay Programme*	*Number of perators in the programme*
1	Perlis	Homestay Kg Ujong Bukit	12
2		Homestay Kg Paya Guring	22
3		Homestay Felda Mata Ayer	22
4	Kedah	Homestay Kg Jeruju	19
5		Homestay Kg Relau	29
6		Homestay Kg Raga, Yan	26
7		Homestay Kg KEDA Ulu Legong	35
8		Homestay Kg Sungai Badak	17
9		Homestay D'Belimbing	17
10		Homestay Kg KEDA Lahar Tunjung	19
11		Homestay PulauPisang	16
12		Homestay Kg Sungai Itau	19
13		Homestay Kg PantaiJamai	10
14		Homestay Kg Wang Tok Rendong	69
15		Homestay Padang Lalang	7
16		Homestay Pulau Tuba	28
17		Homestay Kg Bukit Tangga	10
18	Penang	Homestay Teluk Bahang	20
19		Homestay Sungai Semilang	17
20		Homestay Jalan Baru	23
21		Homestay Pulau Betong	13
22		Homestay Sg Chenaam	30
23		Homestay Sg Setar	20
24		Homestay Sg Duri	37
25		Homestay MengkuangTiti	29
26		Homestay PulauAman	20
		Total of homestay operators	586
		Total registered homestay	26

The questionnaires which consisted of 67 items were distributed to the 586 operators for rating purposes in terms of relevancy of those criteria towards success of homestay. A total of 246 completed questionnaires were successfully collected. Next, factor analysis was carried out on the collected data to identify the most significant sub criteria that can be categorized in the main criteria and eliminate all the non-significant sub criteria. The reliability of the study was carried out, and the

result (**Table 2**) shows that the Cronbach's Alpha values for success criteria range from 0.584 to 0.912 indicating that all identified criteria are reliable.

TABLE II: RELIABILITY TEST AFTER FACTOR ANALYSIS

	Dimensions	*Questions*	*Cronbach Alpha Values*
Success criteria	Community benefit	F5,F7,PK5,F6,F4,F3,F2,F1,PK6	0.912
	Organizational management and leadership	PO2,PO4,PO3,KK1,KP2,PO1,	0.905
	Marketing and promotion	KP7,KP1,KK2,KP4	
	Conservation of community resources	PNP3,PNP4,PNP5,PNP2	0.837
	Maintenance	SK3,SK5,SK4	0.868
	Responsible participation	PNYL6,PNYL5,PNYL3	0.744
	Networking	PK1,PK2, PO5,KP5,PK3	0.771
	Safety	PNP9,PNP10,NET1	0.718
	Publicity	KES3,KES4,KES2	0.584
		PNP7,PNP6,PNP8	0.763

Then, an additional set of questionnaires was developed. Four respondents who were the experts in community-based rural tourism were approached and asked to give ratings to the success criterion, using the pairwise rating judgment scale of 1-9 for the relative importance of the criteria being considered. The pairwise rating judgment scale used was adapted from preference scale of AHP technique. The judgments of the rating are as given in the Table 3. In the other set of questionnaires, the same four respondents were asked to give rankings of 1 – 9 to the success criteria, where 1 indicates the most important criterion, while 9 indicates the least important criterion. Next, the data was analyzed for weight formulation to find the criteria of sustainable homestay programme using Modified Pairwise Comparison (Bakar & Kasim, 2011) for the first set of data collected by using the first set of questionnaires, while Rank Order Centroid (ROC) (Barron & Barrett, 1996) technique was used to analyze data collected by the second set of questionnaires.

TABLE III: PREFERENCE SCALE FOR PAIRWISE COMPARISONS

Preference level	*Numeric value*
Equally preferred	1
Equally to moderately preferred	2
Moderately preferred	3
Moderately to strongly preferred	4
Strongly preferred	5
Strongly to very strongly preferred	6
Very strongly preferred	7
Very strongly to extremely preferred	8
Extremely preferred	9

[a] *Source:* Saaty (1980)

III. ANALYSIS OF 9 SUCCESS CRITERIA USING MODIFIED PAIRWISE COMPARISON METHOD

The 4 evaluation of scale 1 to 9 were combined as 1 matrix using geometric mean method and the resulted matrix is given as in Table 4.

TABLE 4: A GEOMETRIC MEAN MATRIX OF 4 MATRICES RESULTED FROM MODIFIED PAIRWISE COMPARISON MATRIX.

Criteria	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*Weight*
1	1	2/3	4/3	5/4	2/3	1	1/3	1	1	0.0821
2	11/7	1	5/3	13/7	3/4	9/8	3/8	9/7	1	0.1050
3	0	0	1	7/9	1/5	1	1/6	4/9	1/3	0.0343
4	1/4	1/2	9/7	1	3/8	3/5	1/6	1	2/3	0.0529
5	3/2	4/3	5	8/3	1	11/5	1/2	26/7	19/7	0.1787
6	1	8/9	11/5	5/3	4/9	1	1/4	5/4	1	0.0869
7	3	8/3	25/4	21/4	2	4	1	5	4	0.3042
8	1/5	7/9	2 1/5	1	1/4	4/5	1/5	1	1/2	0.0595
9	1	1	29/9	10/7	3/8	10/9	1/4	2	1	0.0965
sum	29/3	53/6	145/6	17	6	38/3	23/7	67/4	12	

Then, each value in a column was divided by its column sum. After that, the average value for each row was calculated where the results were summarized in the last column of Table 4. Next, the consistency index (CI) of the pairwise matrix must be checked. First, the pairwise matrix was multiplied with the resulted weights to obtain the sum vectors as shown in the following **Figure 1**.

Criteria	1	2	3	...	...	8	9		weight		Sum vector
1	1	2/3	4/3	⋯	⋯	1	1		0.0821		5/7
2	11/7	1	5/3	⋯	⋯	9/7	1		0.1050		1
3	0	0	1	⋯	⋯	4/9	1/3		0.0343		1/3
4	1/4	1/2	9/7	⋯	⋯	1	2/3	X	0.0529	=	1/2
5	3/2	4/3	5	⋯	⋯	26/7	19/7		0.1787		2 1/7
6	1	8/9	11/5	⋯	⋯	5/4	1		0.0869		3/4
7	3	8/3	25/4	⋯	⋯	5	4		0.3042		2 2/3
8	1/5	7/9	2 1/5	⋯	⋯	1	1/2		0.0595		1/2
9	1	1	29/9	⋯	⋯	2	1		0.0965		5/6
	29/3	53/6	145/6	⋯	⋯	67/4	12				

Figure 1: A matrix of weighted sum vectors

Next, the consistency vector (CV) was calculated by dividing each sum vector with its corresponding weight as shown in Figure 2.

Sum vector		weight		CV
5/7		0.0821		0.0821
1		0.1050		0.1050
1/3		0.0343		0.0343
1/2	/	0.0529	=	0.0529
2 1/7		0.1787		0.1787
3/4		0.0869		0.0869
2 2/3		0.3042		0.3042
1/2		0.0595		0.0595
5/6		0.0965		0.0965

Figure 2: The consistency vector matrix

The average of this value was then calculated to obtain the maximum eigen vector

$$eigen\,vector, \quad \lambda_{\max} = \frac{CV_1 + CV_2 + ... + CV_n}{n} = 9.1340.$$

The consistency index was calculated as follows.

$$CI = \frac{\lambda_{\max} - n}{n-1} = \frac{9.1340 - 9}{8} = 0.0167$$

Lastly, the test of consistency ratio (CR) was calculated as a ratio of CI to random consistency index (RI) as given in Table 5.

$$CR = \frac{CI}{RI} = \frac{0.0167}{1.45} = 0.0116.$$

TABLE IV: RANDOM CONSISTENCY INDEX (RI)

n	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*
RI	0	0	0.58	0.9	1.12	1.24	1.32	1.41	1.45	1.49

Since the CR is 0.0116 less than 0.1, it can be concluded that the inconsistency is acceptable as proposed by Saaty (1980) that if the value of consistency ratio is smaller or equal to 0.1 (10%), the inconsistency is acceptable. The final weight analyzed by Modified Pairwise Comparison method for each success criterion is listed in the following **Table 6.**

Modified Pairwise Comparison Weights of Sustainability Criteria

Criteria	*Description*	*Weight*	*Ranking*
1	organizational management and leadership	0.0821	6
2	community benefits	0.1050	3
3	marketing and promotion	0.0343	9
4	maintenance	0.0529	8
5	conservation of community resources	0.1787	2
6	ensuring safety	0.0869	5
7	responsible participation	0.3042	1
8	publicity	0.0595	7
9	networking	0.0965	4

As shown in Table 6, 'responsible participation' criterion is ranked first using modified pairwise method by the four experts, followed by 'conservation of community resources', 'community benefits', 'networking', 'ensuring safety', and 'organizational management and leadership'. The bottom three criteria in decreasing order are 'publicity', 'maintenance', 'marketing and promotion.'

(A) Analysis of 9 success criteria using ROC method

The Rank Order Centroid (ROC) was used to allocate weights to the selection criteria. The weights of the criteria were determined based on the rank given by the respondents. The weights (*wj*) were calculated using the following formula.

$$W_i = \frac{1}{9}\sum_{k=i}^{9}\frac{1}{k} i = 1,2...9$$

Where

i) i is the i^{th} rank order,

ii) 9 is total number of criteria

iii) w_i = weight of criteria ranked at i^{th} position

iv) $w_1 \geq w_2 \geq \cdots \geq w_n \geq 0$

v) $\Sigma_{i=1}^{9} w_i = 1$

Guided by this approach, the weight given by the respondents for each criterion, the average ROC weights and ranks of the criteria are shown in **Tables 7** and **8**.

As shown in Table 8, the upmost ranked criterion is 'marketing and promotion' with weight value 0.2055 or 20% of the importance to the successful of homestay. Followed by criterion 'organizational management anf leadership' at second rank with weight value 0.1703, indicating that good homestay management and responsible leadership is crucial to ensure the homestay success. Meanwhile, 'maintenance' criteria is ranked third with weight value is 0.1305 which indicates 13% contribution to the success of homestay.

TABLE V: ROC WEIGHT OF SUCCESS FACTORS

Criteria	*Respondents*			
	1	*2*	*3*	*4*
1	0.1753	0.0262	0.3143	0.3143
2	0.0421	0.0123	0.2032	0.1477
3	0.3143	0.3143	0.0828	0.1106
4	0.0606	0.1106	0.1477	0.2032
5	0.0828	0.0828	0.0123	0.0262
6	0.0069	0.0606	0.1106	0.0421
7	0.0123	0.0421	0.0262	0.0123
8	0.1477	0.2032	0.0606	0.0828
9	0.1106	0.1477	0.0421	0.0606

TABLE VI: AVERAGE ROC WEIGHTS OF SUCCESS CRITERIA

Criteria	*Description*	*Weight*	*Rank*
1	organizational management and leadership	0.1703	2
2	community benefits	0.1013	6
3	marketing and promotion	0.2055	1
4	maintenance	0.1305	3
5	conservation of community resources	0.0510	8
6	ensuring safety	0.1041	5
7	responsible participation	0.0232	9
8	publicity	0.1236	4
9	networking	0.0903	7

The fourth rank is the 'publicity' criteria with weight value of 0.1236, followed closely by 'ensuring safety' which is placed at fifth rank with weight value of 0.1041 and next is 'community benefit' criterion with weight of 0.1013. The lowest three criteria are 'networking' with weight value 0.0903, 'conservation of community resources' 0.0510, and lastly is 'responsible participation' 0.0232.

Since both methods produced different results, the average weight of both weights for each criterion was calculated. The results are displayed in table 9.

(B) Analysis of 9 success criteria using arithmetic average of both methods

Average weights and corresponding ranks

Criteria	*Description*	*Weight*	*Rank*
1	organizational management and leadership	0.1262	2
2	community benefits	0.1032	5
3	marketing and promotion	0.1199	3
4	Maintenance	0.0917	8
5	conservation of community resources	0.1149	4
6	ensuring safety	0.0955	6
7	responsible participation	0.1637	1
8	Publicity	0.0916	9
9	networking	0.0934	7

Based on Table 9, criterion 'responsible participation' is the most important criterion with weight value of 0.1637 or 16 % of the importance to develop successful homestay Programme. This is followed by 'organizational management and leadership' with weight value of 0.1262. 'Marketing and promotion' placed at the third rank with weight value 0.1199. The fourth rank is 'conservation of community resource' with weight value 0.1149. The next is 'community benefits', followed by 'ensuring safety', 'networking', 'maintenance' and lastly is 'publicity'.

(C) Analysis of ranking of 9 success criteria using the three methods

Table 9 shows the ranking of the criteria using three methods. It can be observed that results from the three methods differ considerably. Since the rating judgments scale by four experts was used in the average weights methods, the authors adopt results from the third method whereby 'marketing and promotion', 'organizational management and leadership' and 'responsible participation' are the three most important criteria while 'networking', 'maintenance' and 'publicity' are the three least important criteria.

TABLE VII: RANKINGS OF SUCCESS CRITERIA BASED ON THREE METHODS

Criteria	*Rank by ROC*	*Rank by Modified Pairwise*	*Rank by average weight*
1	2	6	2
2	6	3	5
3	1	9	3
4	3	8	8
5	8	2	4
6	5	5	6
7	9	1	1
8	4	7	9
9	7	4	7

IV. CONCLUSION

The study had successfully identified and ranked 9 relevant success criteria for the Malaysia Homestay Programmes. Once the criteria are identified, they were ranked to discover the priority for each of the criteria. The ranking was calculated using three methods which are Modified Pairwise Comparison Method, Rank Order Centroid (ROC) method and average weights of both methods. The two weighting methods were used to poise between pair wise and not pair wise method of evaluations. The results show that among the nine success criteria identified in this study, the programmes' 'marketing and promotion', 'organizational management and leadership' and 'responsible participation' are found to be ranked as the three most important criteria while 'maintenance' and 'publicity' are ranked as the two least important criteria. The establishment of the ranked criteria will allow the

Malaysia Homestay Programme operators, managers and policy-makers to improve their services in order for them to attract more visitors and generate more income, and eventually become more successful in sustaining the programmes.

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