

Tourscape: A systematic approach towards a sustainable rural tourism management

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Abstract. Tourism plays an important role in the Malaysian economy as it is considered to be one of the corner stones of the country's economy. The purpose of this research is to conduct an analysis based on the existing tourism industry in rural tourism destinations in Malaysia by examining the impact of economics, environmental, social and cultural factors of the tourism industry on the local communities in Malaysia. 516 respondents comprising of tourism stakeholders from 34 rural tourism sites in Malaysia took part voluntarily in this study. To assess the developed model, SmartPLS 2.0 (M3) was applied based on path modeling and then bootstrapping with 200 re-samples was applied to generate the standard error of the estimate and t-values. Subsequently, a system named *Tourscape* was designed to manage the information. This system can be considered as a benchmark for tourism industry stakeholders as it is able to display the current situational analysis and the tourism health of selected tourism destination sites by capturing data and information, not only from local communities but industry players and tourists as well. The findings from this study revealed that the cooperation from various stakeholders has created significant impact on the development of rural tourism.

1. Introduction

Rural tourism has evolved significantly since the last decade and it is known as one of the vital source of income to increase the standard of living of the rural communities. Rural tourism plays an important role in bringing in foreign exchange, improve on the economic standing and provide employment opportunities to the local communities. Past studies have evidenced that tourism is a potential industry that can improve on the socio-development of the countries; nonetheless it would not be made possible without the participation and support from the tourism stakeholders [1-4]. Nonetheless, development projects are often designed and implemented in which indigenous people have minimal voice in its policy and management. Hence, partnerships between the stakeholders such as the tourism industry players, government agencies and local communities are needed to promote the socio-economic development of the rural tourism industry. The Malaysian government had started its initiatives in promoting the tourism industry since 1987 [5] and today tourism industry is one of the cornerstone of Malaysia's economic diversification strategy.

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2. Literature review

Past studies have posited that the development of rural tourism has multiplier effect in terms of generating income for the local communities, labour forces and their products [6]. The development of rural tourism is becoming more challenging than ever before given the fact that there are more stakeholders who are concern about rural tourism, hence the issue of gaining cooperation and compliance from various stakeholders in the tourism industry has become a critical issue.

The sustainability of rural tourism development would not be successful without the involvement of stakeholders of rural tourism. Hence, gaining the cooperation among the stakeholders is a fundamental ingredient in ensuring the sustainability of tourism development efforts. In addition to that, stakeholders in rural tourism should be kept alert of the issues and demands of their local counterparts in order to stay competitive in the marketplace [7-9]. Three main stakeholders, namely, tourists, industry players, local communities will be the main focus for this research study.

3. Methodology

A mixed method study was designed which incorporating three phases with a sample of 516 respondents which consists of tourists, industry players' and local communities at rural tourism destinations throughout Malaysia. It is the aim of this study to highlight and to investigate the interests of the different stakeholders to ensure the sustainability of tourism development initiatives. Subsequently, an automated web based system framework and system for an integrated holistic tourism index for rural tourism destinations was designed.

4. Findings

This section presents the main research results based on one perspective, namely Communities. To assess the model developed, SmartPLS 2.0 (M3) was applied based on path modelling and then the bootstrapping [10-12]. A total of 200 re-samples were used to generate the standard error of the estimate and t-values.

4.1. Assessment of the measurement model

Firstly, confirmatory factor analysis (CFA) was conducted to test the reliability, convergent validity, and discriminant validity of the scales. As indicated in the Table 1, most item loadings were larger than 0.5 (significant at $p < 0.01$) with Average Variance Extracted (AVEs) either closed to or exceeded 0.5 [13]. The composite Reliability (CRs) for all the variables exceeded 0.7 [14], while the Cronbach alpha values were either close to or exceeded 0.7 [15]. In addition, as indicated in Table 2, the square root of the AVE was tested against the intercorrelations of the construct with the other constructs in the model to ensure discriminant validity [16,10,17], and all the square root of the AVE exceeded the correlations with other variables. Thus, the measurement model was considered satisfactory with the evidence of adequate reliability, convergent validity, and discriminant validity.

Table 1.Results of Measurement Model.

Model Construct	Measurement Item	Loading	CR ^a	AVE ^b
Recreational Activities	recreational_entertain1	0.533	0.857	0.504
	recreational_entertain2	0.642		
	recreational_entertain3	0.783		
	recreational_entertain4	0.718		
	recreational_entertain5	0.765		
	recreational_entertain6	0.782		
Economics	eco_imp3	0.851	0.825	0.614
	eco_imp4	0.822		
	eco_imp5	0.664		
Social	social_imp1	0.742	0.847	0.584
	social_imp2	0.616		
	social_imp3	0.846		
	social_imp4	0.831		
Cultural	social_cultural1	0.755	0.845	0.578
	social_cultural2	0.695		

Environment	social_cultural3	0.750	0.852	0.660
	social_cultural4	0.835		
	destination_environ1	0.678		
	destination_environ2	0.877		
Infrastructure	destination_environ3	0.868	0.840	0.642
	nat_amenities1	0.873		
	nat_amenities2	0.885		
	nat_amenities3	0.617		
Communities Value	value1	0.797	0.907	0.583
	value2	0.811		
	value3	0.808		
	value4	0.844		
	value5	0.727		
	value6	0.723		
	value7	0.612		

^a Composite Reliability (**CR**) = (square of the summation of the factor loadings)/{(square of the summation of the factor loadings) + (square of the summation of the error variances)}

^b Average Variance Extracted (**AVE**) = (summation of the square of the factor loadings)/{(summation of the square of the factor loadings) + (summation of the error variances)}

Table 2.Discriminant validity of constructs.

	Recreational Activities	Economics	Social	Cultural	Environment	Infrastructure	Communities Value
Recreational Activities	0.710						
Economics	0.105	0.784					
Social	0.007	-0.423	0.764				
Cultural	0.605	0.008	0.109	0.760			
Environment	0.337	-0.098	0.331	0.279	0.812		
Infrastructure	0.707	0.178	-0.178	0.532	0.213	0.801	
Communities Value	0.686	0.187	-0.114	0.621	0.303	0.714	0.764

Note: Diagonals represent the square root of the average variance extracted while the other entries represent the correlations.

4.2. Assessment of the structural model

We also conducted a global fit measure (GoF) assessment for PLS path modelling, which is defined as geometric mean of the average communality and average R^2 (for endogenous constructs; [11]) following the procedure used by [18]. The GoF value of 0.62 (average R^2 was 0.637, average AVE was 0.595) for the (main effects) model, which exceeds the cut-off value of 0.36 for large effect sizes of R^2 . As such, it allows us to conclude that our model has better explaining power in comparison with the baseline values ($GoF_{small}=0.1$, $GoF_{medium}=0.25$, $GoF_{large}=0.36$) [18]. It also provides adequate support to validate the PLS model globally [19].

$$GoF = \sqrt{AVE \times R^2}$$

5. Development of TOURSCAPE

A system called *Tourscapeas* shown in Figure 1 was designed to manage this information. This system can be considered as a benchmark for tourism industry stakeholders as it is able to display the current situational analysis and the tourism health of selected tourism destination sites by capturing data and information not only from local communities but both industry players and tourists. The purpose of *Tourscape* is to propose a model for destination identity and brand development through effective deployment of positioning strategies. This system is able to act as a catalyst to partnership development between stakeholders and regional marketing groups.



Figure 1. Tourscape.

This study has taken a macro approach in promoting visitation in rural tourism destinations in Malaysia. The system has enabled the development of fully integrated repositioning strategy with a cohesive approach involving various stakeholders. This study has led to the development of a commercialized technology system that best support building the rural brand and facilitating consumers' visits, including integration into the online strategy for the industry players and local communities. For example, industry players may want to consider taking a holistic approach to destination branding, analysing the destination from both the supply and demand side, while at the same time recognizing the stakeholders' views and inputs and matching it with customer's expectations when they are in the process of creating the destination brand identity. This system is believed to be able to increase collaborative marketing partnerships of rural areas by increasing the relevancy and benefits to both public and private stakeholders in Malaysia. In addition to that, Tourscape will assist tourism development by reaching out to new visitors in the national and international tourist markets and also help expand marketing and seasonal coverage to drive year-round visitation. The ultimate goal of this system is for stakeholders to collaborate to ensure sustainability of rural tourism development in Malaysia. With the development of Tourscape, it is hoped that through collaborative effort from various stakeholders, joint discussions could be promoted and most importantly, the local folks will be given a fair chance to participate in the development of their communities.

6. Conclusion

The objective of this study is to explore the dimensions of tourism scales that are important for rural tourism development, from the perspectives of the local communities, industry players and tourists. It has been propounded that, the progress of researches on tourism industry in rural areas have been slow primarily due to the non-collaborative effort between the stakeholders and also data collection which were collected at one point in time from either one of the stakeholders. It is believed that with the development of Tourscape, the tourism stakeholders will be able to operate more efficiently and be more sensitive to the needs and interests of all parties which are directly and indirectly involved in tourism development.

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