

EXAMINING THE EFFECTS OF ENVIRONMENTAL COMPONENTS ON TOURISM DESTINATION COMPETITIVENESS: THE MODERATING IMPACT OF COMMUNITY SUPPORT

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ABSTRACT

Contemporarily, tourism sector is a highly competitive environment, which forces tourism players to provide better visitor services in order to stay competitive. In rural tourism, a growing niche in the tourism market, multiple components of environmental constructs play a crucial role in contributing to the sustainability and competitiveness of rural tourism destinations. Hence, this study examines the impact of environment components on development of rural tourism destination competitiveness from a local community perspective. In addition, community support was adopted as moderator variable to examine the relationship among the constructs. 299 respondents comprising of residents of rural tourism in Sarawak, Malaysia took part voluntarily in this study. Data analysis was performed using SPSS Version 21.0 and Smart PLS 2.0 (M3) to assess the developed model, based on path modelling and then bootstrapping. Interestingly, the findings revealed that four of the environmental constructs have had a significant positive impact on destination competitiveness from local communities' perspective.

Keywords: environmental components, destination competitiveness, community support, local communities, rural tourism destination, Malaysia

INTRODUCTION

Tourism makes a vital contribution of economic benefits to communities (Yu, Chancellor, & Cole, 2011) as well as being a source of growth for a country's economy (Kalaiya & Kumar, 2015). According to the World Travel and Tourism Council 2015's report, the economic contributions of travel and tourism industry accounted for about 2.4 trillion US dollar to the world GDP with approximately 105 million jobs opportunities created (WTTC, 2015). In the past decades, tourism has experienced tremendous growth, and visitors are increasingly seeking new places to relax and rest, such as natural tourism destinations (Lin & Yeh, 2013). This interest has attracted increased attention in rural tourism from governments, non-governmental organisations (NGOs), and industry players because of its significant role in leading economy activity and increasing rural incomes (Egbali, Nosrat, & Ali-pour, 2011; Zoto, Qirici, & Polena, 2013).

Malaysia's tourism industry has ranked as the second most important industry after the manufacturing sector for the last twenty years (Tsonis, Cheuk, Ing, & Razli, 2009), is listed as one of the National Key Economic Areas (NKEA) under the Tenth Malaysia Plan and ranked the ninth most visited country in the world (Lo, Songan, Mohamad, & Yeo, 2013). Furthermore, the Malaysia Government Transformation Program attempted to address the needs of rural communities (PEMANDU, 2010) by creating various programmes, such as the homestay programme, to increase rural communities' million inbound tourists' arrivals. With such a large number of tourists, Malaysia's rural tourism has a significant impact on the country's economy and a contributor to the nation's GDP. A large proportion of tourists travel to destinations for relaxation, recreation and getting acquainted with cultural traditions (Egbali et al., 2011). Hence, rural tourism, if equipped with distinct and varied assets, can be a popular tourism destination. Thus, incentives such as accommodation and visitor centre facilities have been developed by Malaysian government for decades (Musa, 2000). Sarawak, rich with various natural heritage and cultural uniqueness bring additional advantages to develop its tourism industry (Er & Simon, 2015). According to Sarawak Corridor of Renewable Energy (2012), Sarawak is targeting for 4 million tourists' arrival and will be generating employment opportunities up to approximately 30,000 people in the state by the year 2020 (as cited in Er & Simon, 2015, p. 1). Realising the important of tourism industry for the growth of country's economy, hence it is imperative to enhance the tourism destination competitiveness and sustainability over time.

While tourism is actively promoted by government and also tourism industry players, however, the promotion activities for rural destinations are less advanced (Papeli, Mohamad, & Mehdi, 2007). Lane (2009) highlighted that for rural tourism destinations to achieve competitiveness, their unique characteristics, landscapes, and attractions must be fully leveraged, developed and promoted. Existing research on competitiveness in tourism development has recommended a broad range of perspectives that should be investigated (e.g., Mihalic, 2000; Dwyer & Kim, 2003; Lee & King, 2008; Kim, 2012). In fact, from the limited number of studies on competitive strategies, communities' perceptions, attitudes, behaviour and involvement in tourism planning (Yoon, 2002) have not been clearly addressed. Furthermore, local community support and access to the natural attractions are keys to success for rural tourism (Melo & Farias, 2014). However, over-exploitation and over-development of tourism activities often reduce the natural resources and communities' quality of life. Further, development process often ignore communities' point of view which leads to dissatisfaction among the local residents. Hence, the concept of rural tourism development can be improved. While there are benefits from tourism activities for industry players and local communities (Knollenberg, 2011), extensive growth of tourism without properly plans and controls tend to destroy major tourism attractions (Sanjay, 2008). In fact, rural areas attract tourists based on their distinct culture, history, natural environment, beautiful landscape (Erokhin, Heijman, & Ivolga, 2014; Trukhachev, 2015) and community (unique ethnicity) atmosphere. Hence, without careful management, visitors can destroy sensitive environmental attractions at a location, effectively, "tourism can kill tourism" (Glasson, Godfrey, & Goodey, 1995).

Meanwhile, tourism destination competitiveness is getting much concern from various stakeholders particularly in the rural setting as it is defined as a very important factor for the success of a tourist destination (Cimbaljevic & Bucic, 2015). Undeniably, environmental constructs in tourism development are essential element of destination competitiveness, but support from local community also plays an important role in ensuring sustainability of rural tourism development (Spencer & Nsiah, 2013) and conservation of local resources (Tosun, 2006). If effectively combined, these elements ensure competitiveness of tourism destinations. Undeniable, tourism developments have not only protected the quality of life of residents living near tourism destinations, but also developed a more sustainable tourism industry (Harrill, 2004) for tourism development investors and stakeholders (Rahmani, Hajari, Karimian, & Hajilo, 2013). Even though academicians have studied residents' attitudes toward rural tourism

development, however, this area is constantly overlooked during the initial stages of tourism development (Banks, 2010), which can lead to dissatisfaction in local communities. The outcomes of resident dissatisfaction can be obvious; visitors are not welcomed by residents, which jeopardizes their positive holiday experience (Gursoy, Jurowski, & Uysal, 2002), and eventually affects revisit intentions and word-of-mouth recommendations (Yu et al., 2011).

Overall, properly planning rural tourism is vital as it benefits tourism stakeholders, such as local communities and industry players, and also tourists who experience natural and cultural resources. Thus, this study attempts to examine the effect of environmental constructs (e.g., environmental conservation, tourism infrastructure, carrying capacity, & quality of environment) toward the development of rural tourism destination competitiveness from the local communities perspective and community support adopted as a moderator variable in moderating the relationship among the constructs. The present study makes significant contributions to rural tourism knowledge by investigating rural tourism destination competitiveness from a local community perspective. In addition, this research is unaware of existing research that investigated the relationship between environmental constructs toward destination competitiveness with the moderating impact of community support in the Malaysia context, particularly Sarawak. Hence, this study contributes to the existing literature, and further extends existing knowledge.

LITERATURE REVIEW

Rural Tourism

Rural tourism refers to tourism activity that takes place in the countryside (Ratz & Puczko, 1998) and tourism is known as one of the priority tools for rural planning in Malaysia (Liu, 2006). The broader definition of rural tourism, as defined by Gannon (1988), is a range of activities, services and amenities related to tourism, provided by rural people to attract tourists to their area in order to increase local income. This was later developed and defined as a multi-faced activity that takes place in an environment outside heavily urbanised areas, and is dominated by agricultural pursuits, forestry or natural areas (Beeton, 2006). Recently, rural tourism was also defined as a rural environment which includes natural, cultural, and human experiences for visitors to relax (Erdeji, Gagic, Jovicic, & Medic, 2013). Tourism has contributed to communities' welfare (local communities), travellers' experience as well as a country's income (Peptenatu, Pintilii, Drăghici, & Stoian, 2009). With the decline of traditional agrarian industries, rural tourism has been actively suggested as an alternative solution to generate income for rural

communities (Ruiz-Molina, Gil-Saura, & Moliner-Velázquez, 2010; Moric, 2013). If successful, rural tourism is a unique and valuable industry to further develop, because it contributes to the creation of employment opportunities in the rural sector and helps increase the quality of life for local communities (Warren, 2013).

In addition, rural tourism's connection to the physical natural environment (Hall & Boyd, 2005; Brouder, 2013), which is less congested and has more natural amenities for the purpose of relaxation (Mohamad, Lo, Songan & Yeo, 2012), means these are the attributes that attract tourists in making choices for holiday destination. Development of major cultural and natural heritage attractions (e.g., handicrafts, cultural amenities) plays a pivotal role in enabling communities to increase their income (Rahmani et al., 2013). As highlighted by Cawley and Gillmor (2008), rural tourism development should be community based and markedly involving a wide range of community resources. Not surprisingly, community support has been postulated as one of the importance components in ensuring sustainability and successful operation of rural tourism destinations (Sheldon & Abenoja, 2001; Gursoy et al., 2002; Jurovski & Gursoy, 2004).

Environmental Constructs

The environment has emerged to be of most concern to the public, followed by social-cultural and economic issues in the tourism industry. Stemming from the awareness, the environment has become one of the main pillars for sustainable tourism development, particularly, rural tourism destination (Sedmak & Mihalic, 2008; Fons, Fierro, & Patino, 2011). The term *environmental constructs* has been defined as related components that refer to the physical environment, which includes natural or manmade components and in a broader sense, social and cultural environments (Mihalic, 2000). Scholars (Goulding, Horan, & Tozzi, 2014; Yu, 2014) revealed the importance of environment components, such as natural resources and cultural attractions of a tourism destination, in developing a unique tourism product to attract visitors. In addition, natural resources have turned out to be the most important authenticity element in developing key competitiveness of a tourism destination (Sedmak & Mihalic, 2008). In this connection, it is vital to conserve the environment as much as possible to ensure sustainability of tourism attractions as the number of visitors increase. Findings from Reimer and Walter (2013) postulated that preservation practices have to focus on manmade components as much as natural environmental components, as all these form part of the tourism product that attracts tourists and must also satisfy community by increasing quality of life. Hence, the multi-environmental constructs include environmental conservation, tourism infrastructure, carrying capacity, and quality of environment.

Environmental Conservation

The term “conservation” defined as managing the resources of the environment (e.g., air, water, soil, mineral resources and living species) in order to achieve the highest sustainable quality of life (Jafari, 2000). Subsequently, the emerging of “ecotourism” had indicated a strong correlation with environmental conservation (Zhang & Lei, 2012). Specifically, ecotourism involved the environmental protection activities for ecological sustainability. Apparently, the implementation of conservation activities depends much on the resident attitudes and involvement (Mbaiwa, 2008) due to the reason that rural tourism destination is their long stay homelands, without their support and cooperates, the environmental conservation practices would mostly fail (Sekhar, 2003). Scholars (e.g., Candrea, 2013; Reimer & Walter, 2013) have noting that preserving and conserving the environment significantly ensuring the sustainability of local communities' income. Apparently, the success and failure of environmental conservation very much depends on resident attitudes (Ite, 1996; Weladji, Stein, & Vedeld, 2003), particularly in rural tourism (Taylor, 2000; Mbaiwa, 2008). Because tourist developments are developed and operated over a long period of time, communities' lack of cooperation or support for environmental conservation reduces the degree of success in conserving the tourism destination (Sekhar, 2003). In this way, Reimer and Walter (2013) postulated that tourism environments should be critically conserved in order to mitigate the adverse impact of overcrowding and increase the sustainability of tourism destination (Candrea, 2013).

Tourism Infrastructure

Tourism infrastructure is defined as physical element that is created or made to cater visitors and further divided into two main groups, namely soft infrastructure (e.g., services) and hard infrastructure (e.g., transportation facilities, information and access facilities) (Inskeep, 1991; Wilde & Cox, 2008). Past researchers (e.g., Hankinson, 2004; Aref & Gill, 2009) have affirmed transportation infrastructure as the fundamental tourism resources to enhance tourism destination competitiveness. Tourism infrastructure is vital to a tourism destination, particularly for rural tourism destination as it is the basic amenities and infrastructure to support tourism activities and enable tourists to reach the tourism destination. Scholars (Kaul, 1985; Wilde & Cox, 2008; Aref & Gill, 2009) have postulated the important of transportation infrastructure in the success or failure of a tourism destination. The various types of transportation infrastructure, from air, on water, and on land are recognised as the important infrastructure to connect one point to another. The availability of good transportation system is important (Prideaux, 2000) to overcome the physical

barrier to reach a tourism destination, particularly if the rural tourism destination is geographically dispersed, and reduces transportation costs.

Carrying Capacity

Carrying capacity is defined by World Tourism Organization (WTO) (1994) as the maximum number of people that may visit a tourist destination at the same time and without degrading the physical, economic, socio-cultural environment and the quality of visitors' satisfaction. Collectively, the increasing numbers of tourists visiting a tourism destination would lead to the degradation of part of the natural resources, and hence, in the future, tourists will not experience the same natural beauty and resources as before. From this, the carrying capacity of a particular destination can be seen to influence sustainability of a tourism destination and competitiveness in a long run. Indeed, several authors posited that there is a positive relationship between carrying capacity and sustainable tourism destination (Butler, 1997; Liu, 2003), and problems start to occur if carrying capacity practice are not managed properly (Swarbrooke, 2002; Manuel & Miguel, 2008). This reduces sustainability and competitiveness of the tourism destination.

Quality of Environment

The quality of environment significantly influenced the competitiveness of a rural tourism destination, as tourists visit is to experience the quality of natural features and beautiful scenery (Kulcsar, 2009). Quality of environment can refer to the quality of natural and beautiful scenery, clean water, fresh air, and species diversity of the destination (Mihalic, 2000). Furthermore, a proper conserve environment would provide a higher quality of environment that satisfies tourists (Zhang & Lei, 2012; Melo & Farias, 2014). Moreover, the quality of environment is also significantly determining locals' quality of life (Hunziker, Felber, Gehring, Buchecker, Bauer & Kienast, 2008). A number of researchers have affirmed the importance of environmental quality, like the local landscape and environmental scenery, is a feature of a successful tourism destination (Sedmak & Mihalic, 2008; Mak, Cheung, & Law, 2009; Fons et al., 2011; Zhang & Lei, 2012). Achieving quality requires both tourists and local community to actively participate in improving the environment and not further decrease the environmental conditions. Numerous improvement strategies can be employed, such as the local community actively supporting environmental management and the development of strong ecological features, and tourists being involved in environmental protection while visiting a tourism destination.

Community Support

Scholars Spencer and Nsiah (2013) defined community support as an integral part of the tourism product and hospitality to the extent that individual community members can affect visitors' satisfaction, expenditure levels, and propensity to visit again and recommend the destinations to others. Both community participation and community involvement were categorised as the sub-dimensions of community support. Community participation can also lead to active community involvement in successful tourism development (Tosun, 2006; Miranda, 2007). Collectively, both community participation and involvement play a significant role in community support for tourism development (Jurowski & Gursoy, 2004). Furthermore, community support for visitor services (Yoon, Gursoy, & Chen, 2000; Fallon & Kriwoken, 2003) and community involvement for improved access facilities (Jurowski, 1994; Yoon, 1998) also significantly contribute to the success of the tourism industry. A number of researchers have revealed that community support is essential in ensuring sustainable development of rural tourism industry as well as rural economic development (Sharma & Dyer, 2009; Scales, 2014a). A few studies have suggested that it is vital for a community to support rural tourism development as local residents keep control and ownership of the tourism product offerings (Lewis, 1998; Jones, 2005; Tosun, 2006). Hence, rural tourism has become a viable strategy to develop rural community and sustain their income. In this regard, Lee (2011) further posited that community satisfaction will lead to tourists being welcome and provide visitors with high-quality experiences of rural environment (Lepp, 2007).

Destination Competitiveness

Tourism destination competitiveness refers to the destination's ability to generate welfare and sustainability (Cavender-Bares, Heffernan, King, Polasky, Balvanera, & Clark, 2013). Hence, destination competitiveness is achieved when its market share and financial returns are increasing (Vengesai, 2003). In the past, tourism destination competitiveness has been discussed from various perspectives, such as an environmental perspective (Mihalic, 2000), economic perspective (Buhalis, 2000), and social cultural perspective (Jennifer, Strickland-Munro, Allison, & Moore, 2010). However, the majority of discussions were based on environmental perspectives (Ritchie & Crouch, 1993; Hassan, 2000; Dwyer, Mistilis, Forsyth, & Rao, 2001; Gomezelj & Mihalic, 2008) in which the environment component was taken as one of the four determinants of tourism competitiveness other than comparative advantage, industry structure and demand factors (Hocquette & Chatellier, 2011; Battaglini, Bovolenta, Gusmeroli, Salvador, & Sturaro, 2014). Past studies have highlighted the importance of environmental components

towards the sustainability of the tourism industry (Chandralal, 2010; Miller, 2001), the development of destination competitiveness strategy (Kim, 2012), have documented the importance of environmental components (such as environmental conservation, environmental education, cultural attractions) towards development of destination competitiveness (Mihalic, 2000; Kotane, 2011; Chen, Chen, & Okumus, 2013; Spencer & Nsiah, 2013).

Among literature documenting the contribution to destination competitiveness of tourism core resources and attractors (Ritchie & Crouch, 1993; Buhalis, 2000; Hassan, 2000; Wilde & Cox, 2008), price competitiveness (Dwyer, Forsyth, & Rao, 2000; Kim, 2012), and quality management (Go & Govers, 2000), scholar Mihalic (2000) focused on a different aspect, environmental management. Together, Gomezelj and Mihalic (2008) proposed that it is necessary to conserve the nature of the environment and at the same time ensure the sustainability of the core resources (Scales, 2014b; Battaglini et al., 2014). Collectively, the models developed in this context highlight that effective and efficient strategy improves destination performance and achieves competitiveness. In short, destination competitiveness can be enhanced through various strategies, including destination management, sustainable development, and improved quality of service experience (Buhalis, 2000; Ritchie & Crouch, 2000; Dwyer & Kim, 2003).

Hypotheses Development

Environmental Constructs and Destination Competitiveness

Rural tourism activities take place in the countryside (Kulcsar, 2009) and the environment aspects are the main attraction to lure tourists (Lo, Ramayah, Songan, & Nair, 2013). Tourists visit a rural tourism destination because the environment is free from pollution problems (e.g., no water and air pollution, no destruction and deforestation) and they can relax (Miller, 2006; Goodwin, 2008). In addition, Mihalic (2000) noted that for a rural tourism destination to achieve competitiveness, environmental conservation practices play a vital role in sustaining the competitiveness of a rural tourism destination (Diaz & Rodriguez, 2008). Hence, for a rural tourism destination to stay competitive, the preservation of natural resources is important (Angelkova, Koteski, Jakovlev, & Mitrevska, 2012). Tourism infrastructure refers to the availability of transport services and basic amenities in a tourism destination (Mo, Howard, & Havitz, 1993). These infrastructure facilities make a significant contribution to the development of destination quality (Murphy, Pritchard, & Smith, 2000) and tourism destination competitiveness (Tozser, 2010). Dwyer and Kim (2003) also postulated that tourism infrastructure is next most significant factor in determining destination

competitiveness after environmental indicators (Khadaroo & Seetanah, 2008). Furthermore, the improved tourism infrastructure has increased the accessibility for tourists to reach a particular tourism destination (Su & Wall, 2009) and this would lead to the increase of destination competitiveness (Hsueh & Yeh, 2014). Likewise, the efficiency of tourism infrastructure for a tourism destination is the fundamental attraction that brings tourists to the destination (Mazilu & Stancioiu, 2009; Moric, 2013).

Carrying capacity refers to the maximum number of tourists that can visit a tourism destination without reducing the quality of the natural environment and tourists' satisfaction (Nghii, Lan, Thai, Mai & Thanh, 2007). The issues of carrying capacity get intense attention as it jeopardizes tourists' satisfaction. Moreover, other scholars (e.g., Mathew, 2009; Dwyer, 2001; Mihalic, 2000) have affirmed carrying capacity as the significant pillar and a key driver to achieve competitiveness. When the number of tourists visiting a destination increases, the degree of relaxation afforded tourists decreases. Furthermore, from the communities' perspectives, the number of tourist arrivals must be control in order to ensure the quality of environmental conditions guaranteed during their visit. Environmental quality refers to the quality of the natural attractions (Mihalic, 2000), which are a significant determinant in attracting tourists to a destination. Empirical studies show that the quality of the environment plays a vital role in the development of tourism destination competitiveness, particularly for rural tourism (Gooroochurn & Sugiyarto, 2005; Royo-Vela, 2009; Park & Yoon, 2009). In a study by Moric (2013), the “wild beauty” image or quality of natural habitat increased attractiveness of eco-rural tourism destinations. Thus, a competitive rural tourism destination should possess not only beautiful landscapes but also be hassle-free environments to lure tourists (Cai & Li, 2009; Pesonen, 2012). Based on the above discussion, the hypotheses developed as following:

- H1: Environmental conservation is positively related to destination competitiveness.
- H2: Tourism infrastructure is positively related to destination competitiveness.
- H3: Carrying capacity is positively related to destination competitiveness.
- H4: Quality of environment is positively related to destination competitiveness.

Community Support Moderates Environmental Constructs and Destination Competitiveness

Understanding the importance of local community support toward the development of sustainable rural tourism destinations (Muganda, Sirima, & Ezra, 2013; Chandralal, 2010) is vital in demonstrating environmental conservation practices and contributing to the development of tourism destination competitiveness (Sekhar, 2003; Manyara & Jones, 2007; Zhang & Lei, 2012). Even though some tourists may stay in a destination for a long time, few may contribute to conservation, hence, the community itself needs to be involved in conserving the environmental resources (Fernando & Long, 2012). Past research (e.g., Stronza & Gordillo, 2008; Lo et al., 2013) has demonstrated that local community involvement and support for environmental conservation of tourism destinations produces better outcomes than the inclusion of other stakeholders. The development of tourism infrastructure significantly contributes to the creation of tourism destination competitiveness (Hankinson, 2004; Aref & Gill, 2009). Community involvement in preparing local transportation services to tourists is also important to ensure the rural tourism facilities achieve a satisfactory level (McIntosh, Goeldner, & Ritchie, 1995) and it contributes to the economic benefits for local communities and success for the destinations (Deery, Jago, & Fredline, 2012). Although there is substantial literature documenting the importance of community support towards tourism development (Jamal & Stronza, 2009; Matarrita-Cascante, Brennan & Luloff, 2010; Muganda et al., 2013), however, community support towards tourism infrastructure also crucially contributes to the development of rural tourism destination competitiveness by providing more access facilities for tourists to reach the destination.

The issues of carrying capacity in a rural tourism destination are increasingly concerns held by tourists because they do not want their visit affected by the maximum number of tourists at a tourism destination (Wilde & Cox, 2008). Past studies (e.g., Saarinen, 2006; Okech, 2011) revealed that the sustainability of tourism is associated with the level of involvement and participation of communities in the tourism development process. Local communities' involvement in controlling the number of visitors is essential to ensure the number of visitors does not exceed the maximum limit and community lifestyles and tourist satisfaction remain unaffected (Huh & Vogt, 2008; Nunkoo & Ramkissoon, 2010). Quality of environment is another important source of rural tourism destination competitiveness as compared with other tourism destinations (Park & Yoon, 2009). Tourists are attracted to the natural components of a tourism destination in order to relax and enjoy during the

whole vacation. In order to achieve destination sustainability, communities play an important role in conserving and maintaining the quality of the environment. In fact community support in the form of being involved and participating in maintaining the quality of environment is a crucial link in the development of competitive and sustainable rural tourism destination. Based on the above discussion, the hypotheses developed as following:

- H5: Community support moderates environmental conservation and destination competitiveness.
- H6: Community support moderates tourism infrastructure and destination competitiveness.
- H7: Community support moderates carrying capacity and destination competitiveness.
- H8: Community support moderates quality of environment and destination competitiveness.

METHODOLOGY

Sample Selection and Data Collection

In present research, an exploratory approach through distribution of questionnaires was conducted. The population of this study consists of local communities from the three rural tourism destinations in Sarawak, namely Bario Kelabit Highland, Annah Rais Bidayuh Longhouse, and Bako National Park. Data were collected through questionnaires administered by face-to-face interview in the local communities of three rural tourism destinations in Sarawak, Malaysia. An adequate number of samples for research is between 30 to 500 (Sekaran & Bougie, 2010; Sekaran, 2000). In the present study, the minimum sample size ($n = 60$) was calculated using the formula taken from Hair, Black, Babin, Anderson and Tatham (2010). [The Minimum sample size = $WnXn$, where, Wn = Observation (Weight determined by the multi variate technique); Xn = Observed variable. So, 10×6 variables = 60 respondents]. However, a total of 450 questionnaires were distributed to the local communities from three selected rural tourism destination, only 299 were returned and used for analysis. The large number of questionnaires given out was to ensure a sufficient number of returned questionnaires. The selection of these respondents was based on convenience sampling due to the fact that in rural tourism destination the availability of respondents are limited.

Measures and Analysis

Collectively, the items used to measure environment components were mainly adapted from Perdue, Long, and Allen (1990), Mihalic (2000), Dwyer and Kim (2003), Gebhard, Meyer, and Roth (2007), and Chen et al. (2013). In addition, items adapted to measure destination competitiveness were from Crouch and Ritchie (1999), Hassan (2000), Mihalic (2000), and Dwyer and Kim (2003). Last but not least, items adapted to measure community support were mainly from Jurowski (1994), Yoon (1998), and Yoon, et al. (2000). Respondents were asked to respond to each statement using a seven-point Likert scale (ranging from 1 = *strongly disagree* to 7 = *strongly agree*) for each statement. Maddox (1985) recommended the use of Likert type scale in tourism research to get a better validity (Ko & Stewart, 2002). To assess the model developed SmartPLS 2.0 (M3) software was used to analyze the data collected with the Structural Equation Modeling-Partial Least Square (SEM-PLS) approach. This included path modeling and then bootstrapping (Gudergan, Ringle, Wende, and Will, 2008; Chin, 1998). A total of 500 re-samples were used to generate the standard error of the estimate and t-values. PLS was used in this study is because of its ability to give more accurate estimates of moderator effects by accounting for the error that attenuates the estimated relationships and improves the validation of theories (Chin, Marcolin, & Newsted, 2003; Helm, Eggert, & Garnefeld, 2010).

FINDINGS

Assessment of the Measurement Model

First, confirmatory factor analysis (CFA) was conducted to test the item reliability, convergent validity, and discriminant validity of the measurements scales. As shown in Table 1, all the items loading (showed in final iteration) exceeded the minimum cut off point of 0.50 (Gefen, Straub, & Boudreau, 2000; Bagozzi, Yi & Philipps, 1991), thus, the internal consistency was achieved. In terms of convergent validity, all the composite reliability (CR) values were above the minimum cut off point of 0.7 (Chin, 2010; Riquelme & Rios, 2010) and the average variance extracted (AVE) values meet the minimum criteria of 0.50 (Fornell & Larcker, 1981). For discriminant validity (see Table 2), the value of AVE will be square rooted and testify against the intercorrelations of the construct with other constructs in the research model (Chin, 2010) and all the values noted as greater than each of the constructs correlations (Chin, 2010; Fornell & Bookstein, 1982). Hence, the measurement model was satisfactory and provided sufficient evidences in term of reliability, convergent validity, and discriminant validity.

Table 1
Results of Measurement Model

Model Construct	Measurement Item	Loading	CR ^a	AVE ^b	Loading	CR ^a	AVE ^b
		First iteration			Final iteration		
Carrying Capacity	Carry_Capac01	0.769	0.678	0.357	0.797	0.725	0.512
	Carry_Capac02	0.501			0.584		
	Carry_Capac03	0.423			Omitted		
	Carry_Capac04	0.637			0.663		
Community Support	Impro_AccF01	0.697	0.847	0.529	0.711	0.849	0.533
	Impro_AccF02	0.593			0.568		
	Supp_ViServ01	0.785			0.777		
	Supp_ViServ02	0.808			0.814		
	Supp_ViServ03	0.734			0.757		
Destination Competitiveness	Dest_Marke01	-0.038	0.800	0.301	Omitted	0.888	0.500
	Dest_Marke02	0.723			0.745		
	Dest_Marke03	0.674			0.684		
	Dest_Marke04	0.777			0.792		
	Dest_Marke05	0.172			Omitted		
	Qual_Servic01	-0.103			Omitted		
	Qual_Servic02	0.615			0.630		
	Qual_Servic03	0.668			0.678		
	Qual_Servic04	0.100			Omitted		
	Sust_Manage01	0.048			Omitted		
	Sust_Manage02	0.462			Omitted		
	Sust_Manage03	0.713			0.708		
	Sust_Manage04	0.736			0.715		
Sust_Manage05	0.704			0.689			
Environmental Conservation	Env_Conserv01	0.824	0.873	0.635	0.825	0.873	0.635
	Env_Conserv02	0.901			0.900		
	Env_Conserv03	0.779			0.780		
	Env_Conserv04	0.665			0.665		
Quality of Environment	Qual_Env01	0.714	0.705	0.456	0.713	0.822	0.607
	Qual_Env02	0.859			0.858		
	Qual_Env03	0.757			0.760		
	Qual_Env04	-0.049			Omitted		
Tourism Infrastructure	Tou_Infras01	0.609	0.825	0.489	0.625	0.823	0.501
	Tou_Infras02	0.708			0.714		
	Tou_Infras03	0.578			0.550		
	Tou_Infras04	0.821			0.826		
	Tou_Infras05	0.752			0.742		

Note:

^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))

* Carry_Capac03, Dest_Marke01, Dest_Marke05, Qual_Servic01, Qual_Servic04, Sust_Manage01, Sust_Manage02, & Qual_Env04 were deleted due to low loading.

Examining the Effects of Environmental Components on Tourism Destination Competitiveness

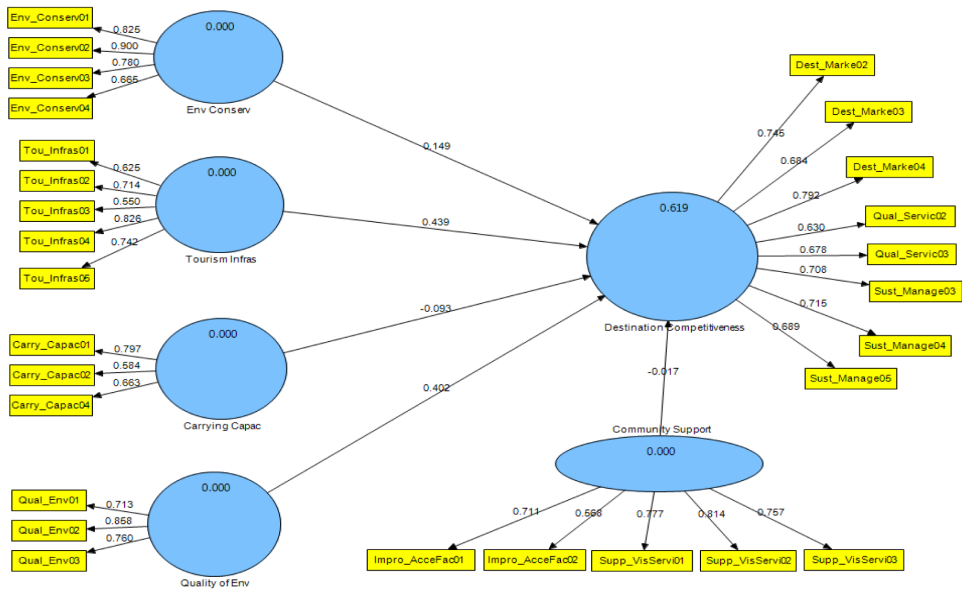


Figure 1. Results of the Path Analysis

Table 2
Discriminant Validity of Constructs

	Carrying Capac	Community Support	Destination Competitiveness	Env. Conserv	Quality of Env	Tourism Infras
Carrying Capacity	0.716					
Community Support	0.095	0.730				
Destination Competitiveness	-0.135	-0.083	0.707			
Environmental Conservation	-0.123	0.001	0.404	0.797		
Quality of Environment	-0.070	-0.174	0.328	0.290	0.779	
Tourism Infrastructure	0.015	0.030	0.452	0.378	0.394	0.708

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

Assessment of the Structural Model

Next, Figure 2 and Table 3 present the results of the hypotheses testing. Interestingly, the statistical results showed that four of the direct hypotheses were supported. The results revealed that environmental conservation, tourism infrastructure, carrying capacity, and quality of environment were positive significantly related to destination competitiveness. Surprisingly, community support was found not moderates the relationship between environmental constructs and destination competitiveness. Hence, H1, H2, H3, and H4 were supported, whereas H5, H6, H7, and H8 were rejected.

Table 3
Path Coefficients and Hypothesis Testing

Hypothesis	Relationship	Coefficient	t-value	Supported
H1	Environmental conservation → Destination competitiveness	0.149	4.492**	Yes
H2	Tourism infrastructure → Destination competitiveness	0.439	8.908**	Yes
H3	Carrying capacity → Destination competitiveness	-0.093	2.805**	Yes
H4	Quality of environment → Destination competitiveness	0.402	7.641**	Yes
H5	Community support moderates environmental conservation and destination competitiveness	-0.029	0.439	No
H6	Community support moderates tourism infrastructure and destination competitiveness	-0.128	1.015	No
H7	Community support moderates carrying capacity and destination competitiveness	-0.168	1.138	No
H8	Community support moderates quality of environment and destination competitiveness	0.024	0.522	No

*p<0.05, **p<0.01

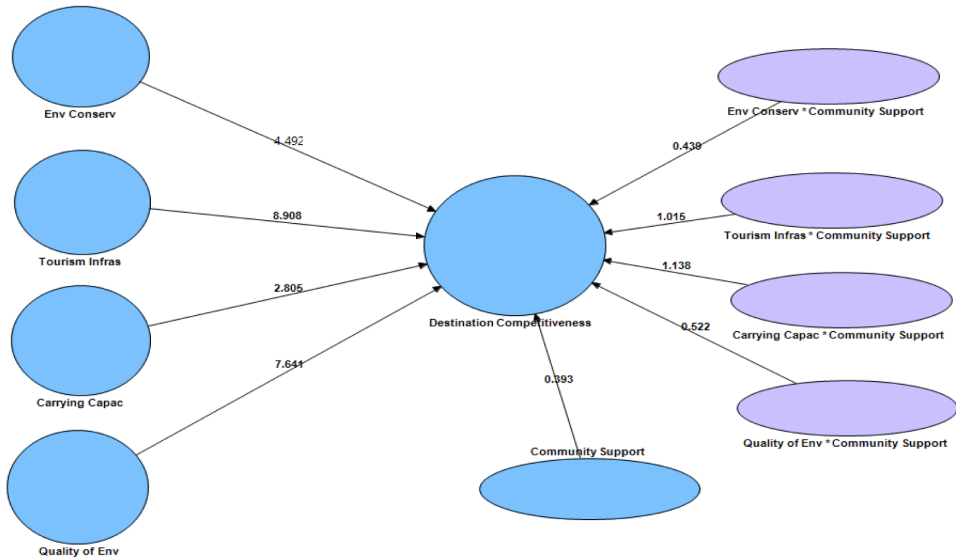


Figure 2. Research Model with t-value

DISCUSSION

The competitiveness of a rural tourism destination is very much depending on the availability of environmental and natural resources to lure tourists' attention to visit (Lokuhetty, Jayawardena, & Mudadeniya, 2013; Erokhin et al., 2014). However, the increasing number of tourists would lead to the deterioration of environmental resources of the tourism destination if it is not properly managed. To this extent, environmental resources play a crucial role in determining competitiveness of a tourism destination. In a simple form, rural tourism destination must consist of both quality natural and man-made resources in order to maintain it comparative and competitive advantage as compare to others tourism destination (Angelkova et al., 2012). Furthermore, the local communities' perspective towards tourism development crucially determine the success and failure of a tourism destination (Muganda et al., 2013) as communities' dissatisfaction would lead to tourists not being welcomed.

The findings of this study revealed that environmental conservation had a significant impact on destination competitiveness ($\beta = 0.149$; $t = 4.492$; $p < 0.01$), and thus H1 was supported. The findings of this study congruence to past studies (e.g., Diaz and Rodriguez, 2008; Zhang & Lei, 2012) which revealed that environmental conservation is significantly influenced destination

competitiveness. The conservation of flora and fauna is increasingly getting concern from various stakeholders (Lokuhetty et al., 2013) due to the fact that a better environmental conservation practices would leads to the sustainability of ecological and natural resources for a tourism destination. Communities believe that the quality of environmental resources (such as natural amenities, cultural and heritage resources, and tourism infrastructure) significantly determine tourists' intention to visit. Hence, it is vital to preserve and conserve the environmental resources in order to maintain their unique selling proposition (USP) and develop tourism destination competitiveness in a long run.

As expected, the empirical results showed that tourism infrastructure had a significant impact on destination competitiveness ($\beta = 0.439$; $t = 8.908$; $p < 0.01$), and thus hypothesis 2 was supported. In the study by Aref and Gill (2009) showed that the significant impact of transportation infrastructure in determining the success and failure of a tourism destination and later enhance the competitiveness of a tourism destination (Hsueh & Yeh, 2014). On the other hand, a quality and improved tourism infrastructure has solved the issues of accessibility for tourists to reach a particular tourism destination (Su & Wall, 2009) and this resources may become one of the fundamental attractors to attract tourists' visit (Moric, 2013; Zeinali & Jafarpour, 2015). The findings of this hypothesis can be justifiable that the quality of tourism infrastructure have significantly affected tourists' intention to visit a rural tourism destination. The infrastructure at the touristic areas plays an important role in attracting tourists as safety issues have been one of the important agenda for tourists when deciding on places to visits.

As hypothesised, the findings showed that carrying capacity had a significant positive impact on destination competitiveness ($\beta = -0.093$; $t = 2.805$; $p < 0.01$), and thus hypothesis 3 was supported. Carrying capacity refers to the maximum number of tourists visiting during a specific time frame which does not influence tourists' satisfaction levels (Nghie et al., 2007). Controlling the number of tourists visiting a destination is vital to overcome issues of overcrowding and sustaining the tourism destination (Manuel & Miguel, 2008). As the motivation of tourists to visit a rural tourism destination is to enjoy and relax in the natural and cultural amenities (Faulkner & Tideswell, 2005), and thus, uncontrolled visitor numbers may jeopardize tourists' experience and satisfaction (Yu et al., 2011). In particular, ecological carrying capacity referred in this hypothesis is about the maximum number of visitors visiting a particular rural tourism destination at a time. This is vital to provide the best environmental condition for tourists to enjoy and relax while maintaining and protecting the ecological resources for future generation. Hence, it is important to control the number of tourists visiting at a time in order to maintain the competitiveness of these rural tourism areas.

On the other hand, the statistical results also indicated that quality of environment had a significant impact on destination competitiveness ($\beta = 0.402$; $t = 7.641$; $p < 0.01$), and H4 was supported. For example, Zhang and Lei (2012) found a positive linkage between quality of environment and destination competitiveness and success of a tourism destination (Fons et al., 2011). Quality of environment is a strong determinant in development of destination competitiveness (Kayar & Kozak, 2008) and significantly influences the competitiveness of a tourism destination to attract tourists (Williams & Cary, 2002). The overall competitiveness of a tourism destination, particularly a rural tourism setting, is heavily dependent on the quality of environment (such as beautiful landscapes and hassle-free environments) to attract tourists. Hence, the availability of quality environmental resources would highly determine the competitiveness of a rural tourism destination. In addition, the quality of the environment is not merely to maintain the attraction level but it is also an important contributor to the local's quality of life while promising tourists' travel experience.

Noting that it is imperative to maintain the quality of tourism resources (such as natural resources, quality of environment and tourism infrastructure) as its significantly determine tourists' intention to visit a rural tourism destination (Lepp & Holland, 2006). Hence, it is vital for rural communities to preserve and practice various environmental conservation strategies in order to maintain their existence of “unique selling proposition” (Lo, Mohamad, Songan, & Yeo, 2012) and this may lead to the development of tourism destination competitiveness over time. Overall, this study examines the relative importance of environmental constructs that contribute to destination competitiveness. The results of this research may lead to the application of the right marketing efforts that lead to long term sustainable practices for rural tourism development.

CONCLUSION

Overall, this study has investigated the importance of environmental constructs towards the development of rural tourism destination competitiveness from local communities' perspective. From the local communities' point of view, the results have revealed that environmental conservation, tourism infrastructure, carrying capacity, and quality of environment are the most important factors in contributing to the development of rural tourism destination competitiveness. It is believed that these findings are important to both researchers and practitioners with regards to rural tourism. Hence, this study provides a better understanding of communities' perception towards development of tourism destination competitiveness. Thus, the empirical evidence provided by this study offers actionable information to tourism

planners and policy makers on the environmental constructs that have greatest influence on rural tourism destination success. Overall, the most important outcome is that collaborating with local communities to identify an effective strategy has the greatest impact on the success of sustainable rural tourism development. In future, researchers who are interested in this field can further test the relationships among these constructs in other tourism destination specifically rural tourism destination.

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