

## ENDOWED AND CREATED RESOURCES TOWARDS ECOTOURISM COMPETITIVENESS: NATURAL PROTECTED AREAS IN SARAWAK

**Jun-Zhou THONG\***

Universiti Malaysia Sarawak, Faculty of Economics and Business, 94300 Kota Samarahan, Sarawak, Malaysia, e-mail: junzhou\_9@gmail.com

**Abang Azlan MOHAMAD**

Universiti Malaysia Sarawak, Faculty of Economics and Business, 94300 Kota Samarahan, Sarawak, Malaysia, e-mail: maazlan@unimas.my

**May-Chiu LO**

Universiti Malaysia Sarawak, Faculty of Economics and Business, 94300 Kota Samarahan, Sarawak, Malaysia, e-mail: mclo@unimas.my

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**Abstract:** The richness of natural areas in Malaysia leads ecotourism to become one of the rapidly growing industries within the nation. The present study aims to discover the impacts of endowed and created resources on ecotourism competitiveness from both domestic and international tourists' perspectives. 189 respondents had completed the questionnaire and WarpPLS 6.0 was used to test the model created. The results revealed that endowed resources (e.g. natural resources and cultural heritage attraction) are positively and significantly correlated to ecotourism competitiveness. Surprisingly, created resources (e.g. tourism infrastructure and range of activities) were observed to have no significant relationship with ecotourism competitiveness.

**Key words:** natural resources, cultural heritage attraction, tourism infrastructure, range of activities, ecotourism competitiveness, tourists' perspectives

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### INTRODUCTION

Tourism, it is a complex occurrence where movement of people across places or nations is involved alongside remarkable number of entities, subjects, sectors, happenings, and behaviours (Baggio, 2019). Recently, a study has shown the growing number of individuals who seek opportunities to travel for authentic experiences on natural and cultural (Forbes, 2017). Based on this fact, policy makers, such as destination marketing organizations (DMO's) and researchers have drawn their attention towards sustainable development of tourism (Hall, 2019). Past studies have postulated several returns led by sustainable development of ecotourism, which comprises alleviation on poverty as well as enhancement in the business opportunities. In conjunction with that, the Ministry of Tourism, Arts and Culture Malaysia (2019) has drawn its attention towards development of ecotourism whereby its campaign of visit 2020 targeted 30 million of international visitors in total with receipt of RM100 billion (New Sarawak Tribune, 23.7.2019, 3).

As revealed by the Ministry of Tourism, Arts and Culture Sarawak (2019), Sarawak, Malaysia has encountered a rise in terms of visitor arrivals with a growth rate of 5.22%. Consequently, there is a possibility that over tourism issues may happen which is increasingly critical to the tourism management. Nevertheless, Centre for Responsible Travel (2018) suggested that, inactive tourism management plan contributes to the over tourism, which is overcrowding of a destination, specifically national parks. As a result, the fall in tourists' arrivals may happen at national parks due to the reduction in quality of visitors' experiences, eventually leads to loss of revenues. Furthermore, destinations might face environmental degradation including pollution in the air, noise, and water at the nature reserve due to ineffective tourism management (Eagles, 2002; Nianyong and Zhuge, 2001; Anup, 2016).

The natural resources of national park play a considerable role as tourists' attraction, as well as other built resources contributing to its destination competitiveness (Lo et al., 2017). As such, with high quality of tourism infrastructure it ensures tourists' expectations are met while increasing destination competitiveness (Su and Wall, 2009; Chin et al., 2017).

Moreover, it is vital to consider the range of activities for better attraction of tourists by offering appealing natural and cultural experiences (Ayikoru, 2015; Zehrer et al., 2017). Previous researchers have discovered that tourists' perceptions are a part of substantial determinants of tourism destination competitiveness (Barsky and Nash, 2002; Carneiro et al., 2015). Consequently, the present study aims to examine the perceptions of both domestic and foreign tourists on the impacts of natural resources, cultural heritage attraction, tourism infrastructure, and range of activities towards competitiveness development of tourism destination.

### LITERATURE REVIEW AND DEVELOPMENT OF HYPOTHESES

#### Competitiveness Theory

Researchers (e.g.: Ritchie and Crouch, 2003; Hanafiah et al., 2016; Croes et al., 2020) highlighted theoretical basis for model development for destination competitiveness considering both concepts on comparative resource and competitive advantage. Comparative resources are referred to core attractions such as natural environment and resources, whereas competitive advantage is defined as elements which are more progressive consisting created resources such as tourism infrastructure and facilities (Crouch and Ritchie, 1999). Subsequently, theories of comparative resource and competitive advantage are focused on past studies in examining tourism destination competitiveness (Ritchie and Crouch, 1999; Mihalic, 2000; Navickas and Malakauskaite, 2009). Likewise, recent studies applied competitiveness theory to investigate sustainable competitiveness of tourism destination to explicate the key competitiveness development from both resources, namely comparative resource and competitive advantage (Jalilvand and Samiei, 2012; Oye et al., 2013; Zehrer et al., 2016; Yozcu, 2017).

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\* Corresponding author

### **Tourism Destination Competitiveness**

The destination competitiveness concept has undergone development where different definitions were proposed (Ritchie and Crouch, 1993; Enright and Newton, 2004; Kim, 2012). The competitiveness of a destination, as suggested by Pearce (1997) its aptitude to maintain its market position among the competing destinations by generating and assimilating value addition to its existing tourism-related products for sustainable resources in the long run (Hassan, 2000). Crouch and Ritchie (1999) suggested a reputable model concerning destination competitiveness for the emphasis of core resources, attractors, and features in relevance to business in determining the competitiveness of a touristic destination (Lee and King, 2007). Past studies have proven the consequential role of tourism core resources and attractors that lead to competitiveness development of a tourism destination (Wilde and Cox, 2008; Armenski et al., 2018; Muresan et al., 2019). Subsequently, Dwyer and Kim (2003) have postulated the necessity for competitiveness development in a tourism destination to ensure sustainability among tourism destinations (Law and Lo, 2016).

### **Natural Resources**

Natural resources are referred to the essence of an environment's core resources that comprise available species on floral and faunal (Crouch and Ritchie, 1999). Recently, a study has shown that visitation to an area has become a concern due to the tremendous growth in the number of tourists visiting a destination (Jaini et al., 2019) where violation of human activities can cause damage to countless floral and faunal species (Sukserm et al., 2012). As indicated by Dwyer and Kim (2003), tourism destinations consist of a remarkable range of tourism products which are significant in attracting tourists including facilities and services (Gunn, 1994) alongside other social-cultural and environmental resources (Buhalis, 2000). Natural resources play a vital role as one of the tourists' main attractions (Hassan, 2010) and competitive advantages of tourism destinations (Ritchie and Crouch, 2000; Jaafar and Maideen, 2012; Law and Lo, 2016). Thus, it is sensible for the conservation of natural resources by tourism stakeholders without causing unnecessary impacts to the environment (MacDonald and Jolliffe, 2003; Scales, 2014; Lo et al., 2017) as natural resources dimension is a determinant for tourism destination competitiveness (Ritchie and Crouch, 1993). Consequently, it is hypothesized that:

H1: Natural resources are positively related to destination competitiveness.

### **Cultural Heritage Attraction**

Culture is a mechanism consisting of variation in feelings, ideas, creation, and behaviour performed by human in their social lives (Koentjaraningrat, 1992). From the perspective of culture, uniqueness of a tourism destination is recognized as a remarkable element in the process of branding (Ryan, 2005). Moreover, the element of culture encompasses various aspects such as authenticity, variety, originality, and uniqueness as representation of purity or the degree that a product concerning tourism is well-preserved (Damanik and Weber, 2006). Past studies have postulated positive impression by cultural attributes on tourists' satisfaction (Putri, 2017). Subsequently, Liu (2013) and Park (2014) have demonstrated the shift in the tourists' travel patterns towards cultural experiences, especially destinations that offer unique attributes (Dallen, 2006). Cultural heritage attraction of a destination offers a range of unique heritage which has been identified as the fundamental factor in determining tourism destination competitiveness (Dwyer and Kim, 2003; Dwyer et al., 2004; Gupta and Singh, 2019). Therefore, the following hypothesis is developed:

H2: Cultural heritage attraction is positively related to destination competitiveness.

### **Tourism Infrastructure**

Tourism infrastructure is a physical element, which is created to provide visitors with basic framework for effective development systems including urban areas, industry, and tourism (Inskeep, 1991). Additionally, tourism infrastructure comprises amenities, transportation as well as facilitating resources (Buhalis, 2000; Khadaroo and Seetana, 2008). Furthermore, tourism infrastructure can be categorized into two major groups, namely soft infrastructure which includes perception and experiences among tourists at tourism destination (Dwyer and Kim, 2003; Ancincova, 2014) and hard infrastructure, comprising facilities on transportation, information and access method for visitors (Ritchie and Crouch, 2003; Pride, 2008). Moreover, researchers revealed that transportation infrastructure is a fundamental factor to improve destination competitiveness while determining tourists' visit intentions (Wilde and Cox, 2008; Aref and Gill, 2009; Aguila and Ragot, 2014). Tourism infrastructure plays a vital role in meeting visitors' demands and delivering substantial physical satisfaction to them (Lo et al., 2017). Thus, it is essential for a tourism destination to possess user-friendly transportation infrastructure in order to attract more tourists. Based on the above discussion, the hypothesis is formulated as follows:

H3: Tourism infrastructure is positively related to destination competitiveness.

### **Range of Activities**

Range of activities are defined as a set of activities possible at a tourism destination as important tourism attractor and taken to produce value for its customers (Dwyer and Kim, 2003; Ban and Ramsaran, 2016). These activities comprise facilities for recreation and sports such as golf, tennis, swimming, fishing, night clubs as well as other facilities for visitors with special needs such as ecotourism, cultural and heritage. Additionally, outdoor activities are often emphasized as they serve as the core services in a tourism destination while offering a more cohesive experience to tourists (Buhalis, 2000; Maksimovic et al., 2015). Generally, outdoor activities are conducted for the purpose of gathering both visitors and residents while conducting any activities together to encourage social interaction among all participants (Lo et al., 2017). Moreover, a wide range of activities ranging from cultural, educational, recreational, and natural experiences are important for a tourism destination (Wu and Zheng, 2014). Range of activities help to fulfil tourists' expectations in a tourism destination and play an important role in ensuring successful development of tourism destination competitiveness (Ritchie and Crouch, 2010; Parahiyanti and Hussein, 2016). Thus, it is hypothesized that:

H4: Range of activities are positively related to destination competitiveness.

## **MATERIALS AND METHODS**

The present study was conducted at three national parks situated in Sarawak, Malaysia, namely Bako National Park, Niah National Park, and Gunung Gading National Park. As revealed by the Ministry of Tourism, Arts and Culture Sarawak (2019), among numerous national parks and nature reserves in the state of Sarawak, these national parks sustained substantial number of visits ranging from domestic or international, specifically nature lovers with a growth rate ranging from 1.08% till 45.58% in 2018 as compared to the previous year. The uniqueness of these national parks is well-recognized where it is preserved as the habitat for endangered and protected species like Proboscis monkey, limestones, and Rafflesia. Figure 1 shows the locations of the three studied natural protected areas, located in the state of Sarawak, Malaysia while each of the studied locations is shown in Figure 2.

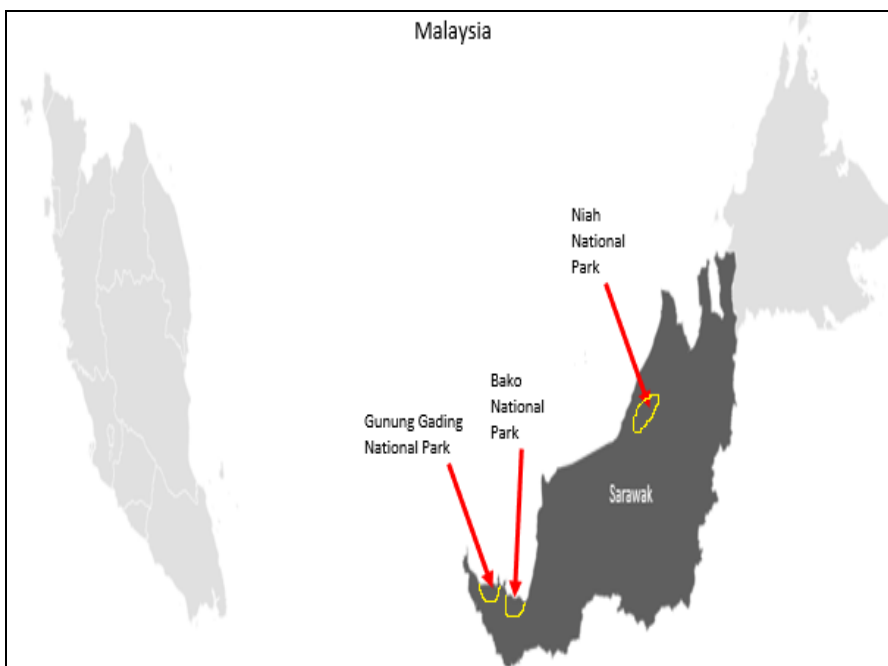


Figure 1. Locations of the studied natural protected areas



Figure 2. The studied natural protected areas of Sarawak

In this study, a quantitative approach was conducted through questionnaires distribution for data collection (Bakker, 2018; Giannoni and Peypoch, 2020). The sample of this study was targeted on both the domestic and international tourists who have visited these national parks. The questionnaire consists of two sections, where the respondents’ demographic information was collected in Section A, whereas Section B consists of the measurement concerning the 5 variables. Based on past researchers (Collins, 2005; Chi and Qu, 2008; Canny and Hidayat, 2012; Herstanti et al., 2014; Artuger, 2015), 24 items in total were adapted to measure the constructs as proposed (e.g.: natural resources, cultural heritage attraction, tourism infrastructure, range of activities, and destination competitiveness).

Consequently, a total of 194 sets of questionnaires were collected through convenience sampling method for statistical analyses. Initially, a series of preliminary analyses were performed on the data collected using Statistical Package for Social Science 26.0 (SPSS) where 5 sets of incomplete questionnaires were discarded. Subsequently, WarpPLS 6.0 (Kock, 2017) was used to assess the present research model as shown in Figure 1 was assessed with using the remaining 189 sets of data. The measurement model comprising valuation on the reliability, convergent and discriminant validity of the measures was used to examine the data in PLS analysis followed by structural model. Then, the hypothesized relationship constructs were tested using bootstrapping.

**RESULTS AND DISCUSSION**

In this study, WarpPLS 6.0 software was applied to analyze the research model as proposed. A two-stage approach was performed, where the measuring model is tested in the first stage, involving the evaluation on reliability and validity of the constructs (Hair et al., 2017). The evaluation of the structural model was conducted in the second stage, enabling the assessment of proposed relationships between the constructs.

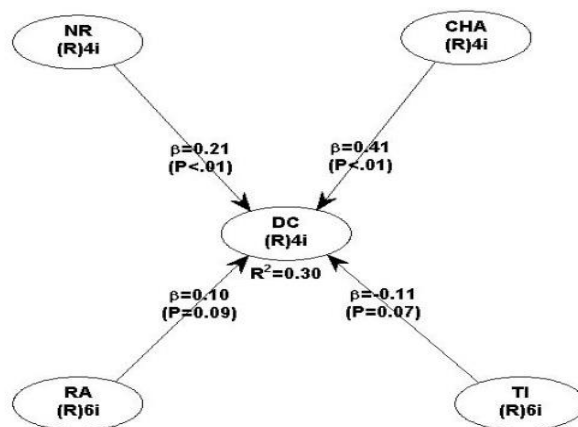


Figure 3. Research Model with path coefficients and p-values

**Assessment of the measurement model**

By using confirmatory factor analysis (CFA) approach, the reliability, convergent and discriminant validity of the measures were tested. The loadings with threshold of 0.5 and above to ensure internal consistency (Bagozzi, Yi, and Philipps, 1991) were abstained in Table 1. As suggested by Chin (2010), the values of composite reliability (CR) should meet the minimum cut off point of 0.7 to declare validity. The values for average variance extracted (AVE) should meet the minimum criteria of 0.50 (Fornell and Larcker, 1981). As a result, the minimum criteria have been met by the values of CR and AVE respectively. In order to test the reliability and internal consistency of the instrument, Cronbach’s alpha values were also adopted (Cronbach, 1951), and the results indicated that the Cronbach’s alpha values for cultural heritage attraction, tourism infrastructure, range of activities, and destination competitiveness were identified at good level, whereas the value for natural resources was considered acceptable. As suggested by Nunnally and Bernstein (1994), the value of 0.60 indicating poor, 0.61 – 0.79 for acceptable, and above 0.80 signifying good level respectively.

Discriminant validity of the measures is shown in Table 2, referring to criterion by Fornell and Larcker (1981), the AVE value was square rooted and testified against the inter-correlation of the construct with other constructs in the research model and all the values noted as greater than each of the constructs’ correlation (Chin, 2010). Hence, the measurement model was acceptable and evidence in terms of reliability, convergent validity, and discriminant validity are provided. Furthermore, the coefficient of determination ( $R^2$ ) was 0.304 for destination competitiveness, which explained 30.4% of the construct. The ( $R^2$ ) was above the minimum indication as suggested by Cohen (1998) which is slightly above the value of  $R^2_{.019}$ .

Table 1. Summary of Construct Reliability and Validity

Construct	No of Items	Items Deleted	Items	Loadings	CR	Cronbach’s Alpha	AVE
Natural Resources	4	2	NR_1	0.779	0.844	0.752	0.631
			NR_2	0.779			
			NR_3	0.821			
			NR_4	0.648			
Cultural Heritage Attraction	4	1	CHA_1	0.837	0.874	0.807	0.648
			CHA_2	0.824			
			CHA_3	0.779			
			CHA_4	0.743			
Tourism Infrastructure	6	0	TI_1	0.848	0.924	0.902	0.670
			TI_2	0.823			
			TI_3	0.808			
			TI_4	0.823			
			TI_5	0.826			
			TI_6	0.782			
Range of Activities	6	0	RA_1	0.797	0.900	0.867	0.601
			RA_2	0.809			
			RA_3	0.778			
			RA_4	0.700			
			RA_5	0.805			
			RA_6	0.757			
Destination Competitiveness	4	0	DC_1	0.804	0.894	0.841	0.678
			DC_2	0.871			
			DC_3	0.832			
			DC_4	0.785			

Table 2. Discriminant Validity of Constructs of HTMT of Measurement Model

	Natural Resources	Cultural Heritage Attraction	Tourism Infrastructure	Range of Activities	Destination Competitiveness
Natural Resources	<b>0.759</b>				
Cultural Heritage Attraction	0.497	<b>0.797</b>			
Tourism Infrastructure	-0.064	-0.013	<b>0.819</b>		
Range of Activities	0.124	-0.010	0.354	<b>0.775</b>	
Destination Competitiveness	0.421	0.493	0.016	0.180	<b>0.818</b>

**Assessment of the structural model**

Next, the results from hypotheses testing are presented in Table 3. As a rule of thumb for one-tailed hypotheses testing, the probability value, p-value must be lower than 0.01 or 0.05 significance. The statistical results indicated that two of the direct relationship hypotheses tested were supported. Natural resources and cultural heritage attraction were found to have significant relation to tourism competitive advantage from both domestic and foreign tourists’ perspectives. Surprisingly, the remaining two hypotheses, which are hypothesized with

the significant relationship between latent variables, namely tourism infrastructure and range of activities were not supported as indicated by the results that they were not significant. On top of that, the variation inflation factor (VIF) values were also acquired to assess the issue of multicollinearity among the constructs. According to Bock et al. (2005), the results indicated that all the VIF values did not exceed 10, thus it is confirmed that no multicollinearity issue exists among the constructs.

Table 3. Summary of Path Coefficients and Hypotheses Testing (Note: \*p<0.05, \*\*p<0.01)

Hypothesis	Relationship	Standard Beta	Standard Error	p-value	Decision	VIF	f <sup>2</sup>
H1	Resources >> Competitiveness	0.213	0.070	<0.01	<b>Supported</b>	2.047	0.009
H2	Attraction >> Competitiveness	0.414	0.067	<0.01	<b>Supported</b>	1.834	0.214
H3	Infrastructure >> Competitiveness	0.106	0.071	0.070	<b>Not Supported</b>	2.735	0.018
H4	Activities >> Competitiveness	0.095	0.072	0.092	<b>Not Supported</b>	1.704	0.017

The resulting analysis for hypothesis 1 demonstrated that natural resources are positively related to destination competitiveness in the context of Bako National Park, Niah National Park, and Gunung Gading National Park. As revealed by the result, natural resources of these destinations can be concluded as a determinant of ecotourism destination competitiveness. In other words, this element of natural resources plays a significant role in determining the competitiveness in an ecotourism destination. Natural resources are of the basic criteria when visitors are making decisions to travel, while acting as a source of attraction for tourists (Crouch and Ritchie, 1999; Lane, 2009). It was suggested that destinations with good quality of natural resources are capable of attracting new market while enhancing the travel experiences among tourists (Hassan, 2010; Jaafar and Maideen, 2012).

The finding is congruent with past study where natural resources of a destination leads to effective development of competitiveness in that particular destination (Law and Lo, 2016; Su et al., 2018). Thus, it is undeniable that the dimension of natural resources in these national parks have been perceived by the visiting tourists as determinant of its destination competitiveness.

In addition, it was discovered that cultural heritage attraction has a significant positive impact on destination competitiveness, thus supporting hypothesis 2. In brief, cultural heritage attraction is positively related to the competitiveness in the destination of the natural protected areas, namely Bako National Park, Niah National Park, and Gunung Gading National Park. The element of uniqueness in a destination is notable especially in the branding progression (Ryan, 2005). According to Damanik and Weber (2006), attractions in a tourism destination must comprise numerous features such as originality, diversity, validity, and uniqueness leading to satisfactory level of experience among tourists (Putri, 2017). Subsequently, the outcomes are aligned with previous investigation by Gupta and Singh (2019) where cultural element is positively related to a destination's competitiveness. In this case, tourists have perceived cultural heritage attraction as an important factor leading to destination competitiveness in these national parks.

The findings demonstrated that three of the other competitiveness determinants (e.g.: tourism infrastructure and range of activities) do not have any significant relationship with tourism destination competitiveness. The statistical finding of hypothesis 3 has indicated that tourism infrastructure has no significant impact on destination competitiveness. This result has a contradiction with past studies which indicated that tourism infrastructure is a significant determinant of destination competitiveness (Tozser, 2010; Chin et al., 2016). The reason could be that the tourists, who are the nature lovers in this case, are uninformed of the importance of the tourism infrastructure due to the fact that they are more emphasized on the abundant of genuine natural resources during their visitations to these natural protected areas, namely Bako National Park, Niah National Park, and Gunung Gading National Park. Furthermore, the findings also revealed that range of activities were not significantly related to destination competitiveness, hence, hypothesis 4 was rejected. There is a contradiction between these findings with the findings by scholars (e.g.: Tubey and Tubey, 2014; Lo et al., 2017), nonetheless, it is reasonable by the fact that the current tourists are satisfied with the events available at these natural protected areas, where factually tourists have provided feedback that they are more emphasized on natural and cultural experiences (e.g.: hiking and sightseeing) instead of additional activities.

## CONCLUSION

In conclusion, the competitiveness of an ecotourism destinations is highly dependent on its natural resources (Lo et al., 2013; Jaini et al., 2019). Generally, both local and international tourists visit ecotourism destination, or known as nature protected areas for short getaway from stressful environment of working. Nonetheless, improper destination management in a tourism destination, specifically natural protected areas may encounter diminution in its environmental resources due to the increased tourists' arrivals. Thus, it is important to ensure tourism destination resources (natural or man-made) to be at decent quality in order to maintain its competitive and comparative advantage as well as its market position among its competitors (Angelkova et al., 2012; Zehrer et al., 2016). Henceforth, this study has revealed and confirmed that tourists perceived that natural resources as the main determinant for the development of ecotourism destination competitiveness. Similarly, the significance of cultural heritage attraction of a touristic destination was also discovered as a contributor towards developing ecotourism competitiveness. Subsequently, tourists are mostly drawn towards exclusive element of culture in an ecotourism destination for satisfactory travel experiences. Consequently, incomparable cultural features in a destination boost tourists' satisfaction, thus, leading tourists to perceive the dimension of cultural heritage attraction as a determinant of competitiveness in a destination.

Additionally, the results from the present study provides to the growing research body on the identification of ecotourism destination competitiveness determinants. Moreover, this study attempts to further understand both international and local tourists' perspectives towards the impact of destination resources (endowed and created resources) on ecotourism destination competitiveness. Thus, these findings can be valuable to policy makers, local planners, and business operators to ensure effective development in ecotourism destinations. In current competitive market, there has been expansion on the importance of destination competitiveness, particularly in ecotourism context. The essential attractors are profoundly dependent on the accessibility of natural resources and destination cultural heritage attraction. Hence, the competitive posture and ecotourism destination sustainability are influenced by the variety of destination core resources. Therefore, further investigation into destination resources and destination competitiveness is strongly recommended.

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