

Supply Chain Management in Tourism: Tunku Abdul Rahman Park, Kota Kinabalu, Sabah

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Abstract— Supply chain tourism has become one of the world's major travel activities. In Sabah, it is one of the main contributors to the state's economy as most travellers visiting Sabah will engage in this type of tourism. In order to acknowledge the services and activities offered, a study was carried out to determine the local Sabahan visitors' perception toward the supply chain tourism activities offered at Tunku Abdul Rahman Park. In addition, the study highlighted the impacts of those supply chain activities on the island's environment. A self-administrated questionnaire was used as the main data collection tool. It was distributed to local visitors on four islands of Tunku Abdul Rahman Park, namely Manukan, Mamutik, Sapi and Gaya Island. The results of the study indicated that most of the local Sabahan visitors were aware of the existence of supply chain tourism activities, and they were satisfied with the services offered at Tunku Abdul Rahman Park. The study also revealed that the supply chain activities would not bring harm to the environment as they perceived the activities would bring benefit to the economy. However, there is an urgency to improve the amenities and signage on the islands involved. This current study is beneficial for policymakers and tourism operators in Malaysia, particularly Sabah. The study's findings have given perceptible evidence and data for Sabah Park management and Sabah Tourism Board to outline promotional approaches that can entice more tourists to visit the island in future and to sustain the islands' environment for the long term.

Keywords— *supply chain tourism; perception; local people; Tunku Abdul Rahman Park.*

1. Introduction

Tourism has been one of the most competitive aspects of the global economy over the past 20 years. In 2009, tourism accounted for over 9 percent of world GDP and nearly 3 percent of jobs. Over the past decade, international tourism has risen by an average of 4-5 percent a year, outstripping most other global economic industries. According to the

UNWTO, while global tourism was badly hit by the economic crisis, dropping by 4 percent in 2009, there was a significant rebound in 2010, with 6.9 percent growth in international tourism arrivals. In 2010, the number of foreign arrivals globally reached a record 935 million. In 2011, the UNWTO predicted growth of about 4-5 percent. Most of the rise, however, is due to emerging economies, and Europe is likely to experience lower growth rates, which in 2011 are expected to be between 2% and 4%. Tourism has become an increasingly important industry in the world, and it has significantly contributed to the national wealth in terms of economic growth, employment and currency exchange [1]. In Malaysia, the domestic and international tourism has become an attractive market segment which contributing about RM86.1 billion for the revenue in 2019 [2]–[4]. This is indicated that Malaysian tourism is one of the most important sectors, after manufacturing and palm oil industry. Malaysia's tourism industry is gradually making its name to the world as one of the destinations that people must visit in Asia.

With a total of thirteen states and three federal territories in Malaysia, each of the states has their very own uniqueness compared to the others. This uniqueness makes each state differs from one another, and they are competing to be the most visited destination in the tourism industry, which offers wide-ranging and unique tourism products, particularly nature- and culture-based attractions. Sabah (located in Northern Borneo, East Malaysia) second largest state in Malaysia is blessed with natural and cultural diversities. The combination of natural and cultural diversities has contributed to the formation of the supply chain tourism industry in Sabah and has grown steadily in recent years [5]. Such natural resources as coral reefs, beaches, seas, islands, rainforests, Mount Kinabalu and the diverse indigenous cultures and ethnicities all have made Sabah one of the eco-supply chain destinations in Malaysia. The availability of those resources facilitates the accommodation of the visitors' diverse demands toward supply chain activities.

There are many studies concerning local residents' perceptions of island tourism. Most of them have focused on a range of key issues including sustainable

management and tourism development [6], island economies and infrastructure investment [7], ecotourism [8]–[10], and community perceptions of impacts towards islands as tourism destination [2], [11], [12]. Besides, it was found out that most of these studies focused on a different area of the tourism destination and there were only a few studies undertaken to understand the perceptions of the local visitors towards supply chain tourism products specifically within the island context. Moreover, all of the studies were conducted outside Malaysia, and only a handful of studies were done in Malaysia and almost none specifically on the island of Sabah. Therefore, the current study was conducted as an exploratory endeavour aimed at determining the perception of the local visitors towards supply chain tourism products and activities, and the impact of those activities on Tunku Abdul Rahman Park (TARP hereafter) environment [13].

1.1. Literature review

Supply chain tourism activities can be defined as any trips to the remote area and will be engaging physical activities, cultural learning's and nature interactions [14], and also involving a kind of leisure activity that takes place in an unusual, exotic and remote or wilderness destination [15]. The supply chain tourism activity can be classified into three main characteristics - land-based, water-based and air-based [16]. In other words, it can be described as outdoor activities which rely on the structures of the natural ground [17]. The activities of supply chain tourism required some equipment that will be used by a visitor to experience the supply chain product. Supply chain tourism activities [18], [19] normally grouped into two categories which are the soft and hard supply chain. Soft supply chain activities normally will involve little physical risk, little no experience and offering more convenience in terms of comfort. Meanwhile, hard supply chain activities involved a high-risk element and tourist need to be physically and mentally fit in order to engage the activities. The growth of supply chain tourism activities in the island areas is likely to bring some environment impacts through human activities. The interaction between supply chain activities and other uses of coastal island and marine environments could cause a complex and passionate dispute between tourist, community and the management over resource management [20], [34]. Hence, if an uncontrollable visitation and activities to coastal and marine areas would lead to marine environmental degradation [21].

The environmental impacts of outdoor tourism recreation have also received some attention, and much of this is directly applicable in commercial supply chain tourism. In order to sustain the island natural environment from degrading, tourism can be

presented as a tool to encourage awareness of the importance to maintenance island biodiversity to tourists and local visitors [22], [23]. [24] argued that tourism could provide conservation with an economic justification, a means of building support for conservation and a source of revenue. The local visitors may view supply chain tourism impact imply either a positive or negative on the island environment. Some of the local visitors have considered tourism could create better awareness and appreciation of environment preservation for tourist purposes, increase investments in the environmental infrastructure to host country, and at the same time may be contributed to environmental pollution, natural resources destruction, degradations of the surrounding [25], [26]. While in most definitions of tourism sustainability, local and non-local tourists were not substantially different from each other, they demonstrated a substantial difference in willingness to pay, with locals being more likely than non-local people to be able to pay special taxes and willing to pay more for higher quality services [27]. The relationship between the extents of the local visitor's perceptions in tourism development is significant, and many of the tourism scholars have stressed out that it is important to understand the local visitors' view towards tourism development. As an example, the local visitor's perceptions and attitude have been taken in consideration while planning the tourism development in that area might have the tendency to support the supply chain tourism development [28], [29]. Therefore, it's considered that long-term planning is needed as it could manage the environmental impact of tourism supply chain activities.

2. Method

The study site was Tunku Abdul Rahman Park (TARP). Situated approximately 8km from the capital city of Kota Kinabalu, the park was gazetted a marine park in 1974 to protect the islands' fauna and flora, and the unique marine environment including the coral reefs. The park comprises five islands, namely Gaya, Manukan, Mamutik, Sulug and Sapi. The study focused on four out of the five islands, namely Manukan, Mamutik, Gaya and Sapi. Sulug Island was omitted from the study because the island is the residential area that was not open to the public, and no tourism activity was allowed. The data collection was done within three months, January until March 2015. Convenience sampling was employed in distributing questionnaires to local Sabahans visiting the four marine park islands. A total of 200 questionnaires were distributed, but only 107 questionnaires were returned. The data were analyzed by using the IBM Statistical Package for the Social Sciences version 25 software

3. Results and discussion

Table 1 demonstrated the profile of the 107 respondents. Of the total number of respondents, 60 (56.1%) were

female, and 47 (43.9%) were male. The majority of them were within the age range of 16 to 25 years (55.1%), followed by 26 to 35 years (26.2%), 36 to 45 years (11.2%) and 46 years old and above (7.5%). As for the marital status, 63.6% of the respondents were single. The respondents' occupation indicated that 34.6% of the respondents were students, followed by private employees (24.3%), government employees (23.4%) and the remaining respondents' occupation were unknown (not stated). Most of the respondents were from the West-coast of Sabah (82.3%), and only a handful of them was from the East-coast (15.8%) and Northern Sabah (1.8%).

Table 1. The Local Visitors Profile

Demographic Item	Profile	Frequency	Percentage (%)
Gender	Female	60	56.1
	Male	47	43.9
Age	16-25	59	55.1
	26-35	28	26.2
	36-45	12	11.2
	46 and above	8	7.5
Status	Single	68	63.6
	Married	38	35.5
	Divorced	1	0.9
Occupation	Student	37	34.6
	Government Worker	25	23.4
	Private Worker	26	24.3
	Others	19	17.8
	Overall Total	107	100.0

3.1 The Respondents' involvement in supply chain tourism activities at TARP

Based on the finding, 72 % of the respondents had a prior visit to TARP, and 28 % were first-timers. In terms of the respondents' knowledge of supply chain tourism activities, the majority of them were aware that TARP was popular as supply chain tourism activities (74.8%). 85% of the local respondents knew the meaning of the supply chain tourism activities, but 56 % of them had not tried the supply chain tourism products offered at the park. Also, 89.7 % of the respondents agreed that the activities offered at TARP were related to supply chain tourism, while 10.3 % of them disagreed. Based on the offered supply chain activities available at TARP, 56.1% of the respondents engaged in snorkelling activities. This was followed by the other top five popular supply chain activities, which were banana boat ride activities (37.4%), short jungle trekking (30.8%), scuba diving (27.1%), parasailing (22.4%) and kayaking (21.5%). The zip-line activity was a relatively new activity at TARP introduced at the end of 2014 and had already seen the participation of 5.6% respondents. The less popular supply chain activity was paragliding, with only 1.9% participation.

3.2 The Local Visitors' Perception of Supply chain Tourism Activities at TARP

Most of the respondents agreed that TARP was an supply chain tourism destination. The respondents agreed that the park was accessible. Most of them also agreed that there was a wide range of activities that they could choose from and participate in the park, and that the adventurous activities offered were suitable for operation at TARP. In addition, the majority of the respondents agreed that the attractions available at TARP attracted to visit the park in the first place. The respondents perceived that the supply chain activities provided at the park were fun and enjoyable. They also indicated an agreement with the statement that they felt safe taking part in the activities provided. In terms of satisfaction, the local respondents were satisfied with the prices of the activities and the public facilities provided at TARP. Furthermore, the respondents agreed that the activities offered at the park were able to attract repeat visitors and that there should be more activities offered at TARP in the future.

3.3 Respondents' Perception of Environmental Impact of Supply chain Tourism Activities at TARP

53.3% of the respondents agreed that they noticed some green practices around the islands. They indicated an agreement with the statement that the landscape of the park was suitable for the supply chain tourism (51.4%) and that they could easily spot the recycle bins provided around the islands (47.7%). Moreover, the respondents agreed that supply chain activities did help promote environmental awareness, and the activities offered reflected the green practices, 46.7% and 43.0%, respectively. At the same time, 36.4% of the respondents agreed that they noticed some billboard campaigning on environmental awareness. The findings also revealed that 40.2% of the respondents agreed that the tour operators did conduct an "operator reminder" to remind their participants of the do's and don'ts before conducting any supply chain activities. Regarding the respondents' perception of the operators practising environmental awareness, it also indicated that the respondents agreed (38.3%) with the given statement. Furthermore, 31.8% of the respondents disagreed that some vandalism occurred around the islands. It showed that TARP did not have defacement or vandalism because of supply chain tourism at the park. However, there were two statements that the respondents had mixed feelings about. The results showed that the respondents could not decide whether the crowds of visitors would harm the environment (29.0%) and if supply chain activities would bring harm in the long run if sustainable practices were absent (27.1%). Some of the respondents perceived that the crowds at the park would not harm the environment as visitors were aware of green practices.

4. Conclusions

Overall, the study revealed that the supply chain tourism at TARP was good as the majority of the local people agreed and were satisfied with the activities offered. The outcomes of study pertaining to local visitors' perception toward the supply chain tourism activities offered on the islands could give some insights or some update information, particularly for the TARP management – operation, maintenance and development of the marine park. Moreover, the perceptions of the visitors are important as they were one of the stakeholders of the industry that could contribute in the improvement of the tourism products [30]–[32] and sustainably maintaining the fragile park resources [33]. Consequently, the findings of the study showed that the majority of the local visitors were satisfied and would make them visit the islands again. Most of the local visitors, furthermore, agreed that the activities offered at TARP were adventurous tourism activities.

The findings, nevertheless, revealed that some local visitors are requesting the TARP management to provide a wider range of sustainable tourism activities in future. With regards to the local visitors' perception of the environmental impact of supply chain tourism at TARP, the findings described that the majority of the local visitors were well-aware of the environmental impact of the supply chain activities there. They believed that supply chain tourism could help create an awareness of and a greater appreciation for the islands' natural resources, including the needs to conserve the environment through long-term planning and to provide a sustainable type of supply chains tourism. However, the findings also showed that some of the local visitors were still short on the awareness of the environmental part as they were only concerned about the economic benefits of tourism development on the islands. The management of the park, therefore, should take some important considerations into this issue in order to sustain the islands' environment for the long term. Since the findings of the study illustrated an uncertainty on whether crowds of visitors would harm the environment and if supply chain activities would bring harm in the long term if sustainable practices were absent, it is wise to propose to the TARP management to increase the awareness campaign activities on green practices by increasing the number of billboard notices with clear and interesting information on green practices and strategically located on the islands.

Other than that, the park management should educate the local visitors in protecting the environment and the surrounding marine areas. Besides that, Sabah Parks should implement carrying capacity for the number of visitors entering the marine park area. The management should also reduce any development

around the islands to protect the environment of the islands as their main objective is to conserve the environment. More supply chain activities should be offered to the visitors in the future to meet the demands of the market but need to adhere to the conservation policy outlined by the park management. In addition, it is recommended that TARP management should be more focused on green practices applied in their management rather than to run the park without taking into consideration the environmental impact.

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