Analysis of Tourist Satisfaction Models

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\textbf{Abstract}
Ecotourism development has been given serious attention by government of Malaysia. The government has invested a lot of money to develop infrastructures and services to fulfill tourists’ wants. Therefore, the development of ecotourism must consider tourists’ preferences at an ecotourism destination. The purpose of this paper is to describe the methods of measurement of the satisfaction level of tourists. Generally, the satisfaction level can be measured by evaluating the gap between tourist expectation and perceived value. There are many of variables may influence the tourists’ satisfaction for example people, overall convenience, price, accommodation and food, commodities, attraction, culture and climate and image. Identification of the relationship between the tourists’ expectation and level of satisfaction is necessary for the ecotourism development. A modified framework to measure the satisfaction level is suggested in this paper.

\textbf{Keywords:} Ecotourism, expectation, satisfaction, measurement and framework

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1. Introduction

1.1 Ecotourism in Malaysia

According to The International Ecotourism Society TIES (1990), ecotourism is “responsible travel to natural areas which conserves the environment and improves the welfare of the local people”. Ecotourism in Malaysia has the potential to become as tourist choice due to its natural attractions and a unique geographical landscape. According to Tourism Malaysia (2008), Malaysia is one of the twelve mega-biologically diverse countries in the world. It has a large number of flora and fauna; as many as 15,000 species of flowering plants, 286 species of mammals, 150,000 species of invertebrates and 4,000 species of fishes in addition to the countless micro-organisms.

Ecotourism in Malaysia has become one of the important industries that can help the economy. Malaysia has won The Best Ecotourism Destination award at the Travel Weekly (Asia) Industry Award 2008. According to estimates Malaysia WWTC, World Tourism and Travel Council (2002), nature-based tourism in Malaysia was growing about 35% per year. The Tenth Malaysian Plan 2011-2015, had underlined approaches strategic to increase sustainability and promote ecotourism destination, and to provide commercial value. About RM 5 billion will be required in the implementation of these developments.

1.2 Ecotourism Development in Kilim Geoforest Park, Langkawi

Kilim Geoforest Park is one of the three Geoparks in Langkawi Island that was established as Geoforest Park by United Nations Educational, Scientific and Cultural Organization (UNESCO) in 2007. Kilim Geoforest Park is located in the northeast corner of Langkawi Island. It provides a new experience for tourists who desire to relax and rest and to enjoy the beauty of nature. The tourist motives can be fulfilled due to the specialty in Kilim such as the unique karst tropical landscape or ‘topography karst’ that was formed about 490 million years ago. It is a complete nature-based tourism destination; it has 99 magical islands with pristine natural resources.

Another Kilim’s attraction is Kilim river mangrove where almost 40% of mangrove species can be found. The other Kilim attractions are karst landscape, fish farm, karst cave, fish feeding, eagle watching, bat cave, seagate etc. Many ecotourism activities can be done in Kilim Geoforest Park such as kayaking down the mangrove river forest, camping, snorkeling and so forth. The development of Kilim as an ecotourism destination has provided job opportunities to local people and tourism businesses.

**Table 1: Tourists arrival in Kilim Geopark in 2006-2011.**

<table>
<thead>
<tr>
<th>Year</th>
<th>The number of tourists arriving</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>42,375</td>
</tr>
<tr>
<td>2007</td>
<td>78,145</td>
</tr>
<tr>
<td>2008</td>
<td>167,142</td>
</tr>
<tr>
<td>2009</td>
<td>115,660</td>
</tr>
<tr>
<td>2010</td>
<td>117,931</td>
</tr>
<tr>
<td>2011</td>
<td>159,338</td>
</tr>
</tbody>
</table>

Sources: Langkawi Authority Development (LADA) 2012.

**Table 2: Facilities and services available in Kilim.**

<table>
<thead>
<tr>
<th>Type of Facilities and Services in Kilim</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tar road</td>
</tr>
<tr>
<td>Jetty</td>
</tr>
<tr>
<td>Parking</td>
</tr>
<tr>
<td>Boat</td>
</tr>
<tr>
<td>Mosque/ prayer</td>
</tr>
<tr>
<td>Food Court</td>
</tr>
<tr>
<td>Tourist guide</td>
</tr>
<tr>
<td>Souvenir shop</td>
</tr>
<tr>
<td>Public toilet</td>
</tr>
<tr>
<td>Public transport</td>
</tr>
<tr>
<td>Telephone and mobile phone coverage</td>
</tr>
<tr>
<td>Rental house</td>
</tr>
</tbody>
</table>

Besides, being an ecotourism site, Kilim must adhere to the criteria set by The International Ecotourism Society (TIES). The
criteria for nature-based destination include increase the economic impact and minimize the environmental impact to build environmental and cultural awareness and respect to provide financial benefits and empowerment for local people to raise sensitivity to host countries’ political, environmental and social climate. The Kilim’s management uses management practices that ensure conservation by identifying the carrying capacity so that the resources are protected. The development of the infrastructures in Kilim is to meet the increasing numbers of tourists to the site (Table 1). The infrastructures developed for the convenience of visitors are shown in Table 2.

1.3 The Impact of Ecotourism Development from Tourists Perspective

The effects of the ecotourism development from the viewpoint of tourists include gaining more knowledge about the natural environment and learning about conservation in the ecotourism site. However some tourists may not like the changes in the environment and the landscape as a result of the development. According to Foster (1973) in Shyan (2011), the tourists see that the price or cost spent on an ecotourism destination is quite high and they may not be able to move freely around the destination area because of planning restrictions.

Although the relevant authority has taken immediate action to develop infrastructure, tourist attraction, businesses, facilities to satisfy the tourists, several issues have appeared such as the declining quality of environment, congestion and interference to local communities (Afendi and Ayob 2007). Furthermore, tourists have to bear the negative impact of the development such as increases in price as more tourists come to the island. Jusoh and Mohamed (2008) highlighted the significance of physical development in Langkawi.

The Malaysian government has spent more than US$86 million for tourism promotion in the island. However, several issues have been found as the cause of tourist dissatisfaction. These include the increase in seasonal tourist that caused an increase in travel expenditure, which is a negative impact on repeat travel; historical tourism product is fading and not preserved, and Langkawi has actually become a foreign tourists’ transit to Thailand and other Asean countries.

Issues concerning tourists are still unexplored especially in term of tourists’ feedback and satisfaction towards developments of facilities and services in ecotourism destination in Langkawi. Therefore, any feedbacks and opinions especially from consumers must be emphasized to ensure the effectiveness of development implemented. Then a study of tourist’s expectation and satisfaction is important.

2. Tourist Satisfaction

Tourists’ satisfaction is the most important issue in tourism business. It can determine successes and failures for an organization or business. Satisfied consumers bring success to the businesses (Raktida Siri, 2009). Furthermore, Yooshik and Muzaffer (2003) claim that satisfaction play an important role in planning marketable tourism products and services. The tourist satisfaction is important to successful destination marketing because it influences the choice of destination, the consumption of products and services, and the decision to return. (Kozak and Rimmington 2000 in Yooshik and Muzaffer, 2003). Hence, as an ecotourism destination, the level of tourists’ satisfaction towards Kilim Geoforest Park should be measured to identify the strength and weaknesses of that site. They are several of approaches measurement tools to measure the level of tourists’ satisfaction.

2.1 Simalto Grid Approach

Simalto (Simultaneous multi-attribute level trade-off) is a research scale that was developed in 1977 (Szwarc, 2005). The Simalto model is a primary market research tool for eliciting customer feedback on the relative “worth” of product features. This tool presents interview respondents with a series of criteria and asks them where they would like to
see improvements and how much they value these improvements. The respondent is shown a grid representing a product or service issues either through a website or fax. The respondent is shown different levels of service or features for each issue. The range is from low levels on the left to high levels on the right. The result from Simalto grid will show the levels of services people receive at present and the level they like (desired level).

2.2 Service Quality (SERVQUAL) Approach

Generally, the popular research instrument to measure the level of tourist satisfaction towards service quality is a Service Quality Model (SERVQUAL) that was developed by Parasuraman (1988). SERVQUAL is a multi-item scale developed to assess customer perceptions of service quality in service and retail businesses (Parasuraman et al., 1988).

The SERVQUAL is used to measure quality in service industry in various contexts, for examples, hospital service, hotel etc. The SERVQUAL model views service quality as the gap that occurs between customer expectation and perceived performance (Fah and Kandasamy, 2011). The SERVQUAL model is represented by 5 quality dimensions (tangibles, reliability, responsiveness, assurance and empathy) in firm’s performance which have significant relationships to consumers’ expectations and perception. Service quality can be defined as the difference between customer expectations of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfactory and hence customer dissatisfaction occurs (Parasuraman et al., 1985; Lewis and Mitchell, 1990 in Shahin, 2004).

2.3 Gap analysis

In addition, service quality can be used in the gap analysis. There are five major gaps in the service quality concept in Parasuraman et al. (1985) as shown in Figure 2. This model is an extension of Parasuraman et al. (1985) who proposed that service quality as a function of the differences between expectation and performance along the quality dimensions.

- Gap 1: Customers’ expectations versus management perceptions: explain the difference between consumers’ expectation and management’s perceptions of those expectations, i.e. not knowing what consumers expect.
- Gap 2: Management perceptions versus service specifications: difference between
management’s perceptions of consumer’s expectations and service quality specifications, i.e. improper service-quality standards.

- Gap 3: Service specifications versus service delivery: difference between service quality specifications and service actually delivered i.e. the service performance gap.
- Gap 4: Service delivery versus external communication: difference between service delivery and the communications to consumers about service delivery, i.e. whether promises match delivery.
- Gap 5: The discrepancy between customer expectations and their perceptions of the perceived service: this gap depends on the size and direction of the four gaps associated with the delivery of service quality on the marketer’s side. (Seth, Deshmukh and Vrat, 2004 and Shahin, 2004)

2.4 Service Quality, Customer Value Satisfaction Model

![Figure 3: The service quality, customer value and customer satisfaction. Sources: Oh (1999).](image)

Another approach to measuring tourists’ satisfaction is by using the service quality, customer value and customer satisfaction approach that has been proposed by Oh (1999). This model (Figure 3) mainly focuses on post purchase decision processes. The model incorporates key variables such as perceptions, service quality, consumer satisfaction, customer value and intentions to repurchase. Finally, word of mouth communication intention is conceptualized as a direct, combined function of perceptions, value, satisfaction and repurchase intentions.

The model provides evidence that customer value has a significant role in customer’s post-purchase decision-making process. It is an immediate antecedent to customer satisfaction and repurchases intentions. Results also indicated that perceived price had a negative influence on perceived customer value but no relationship with perceived service quality. (Seth, Deshmukh and Vrat, 2004). Based on this model, the service quality is a function of perception and expectations and can be modeled as:

$$ SQ = \sum_{j=1}^{k} (P_{ij} - E_{ij}) $$

Where:
- \( SQ \) = overall service quality; \( k \) = number of attributes.
- \( P_{ij} \) = Performance perception of stimulus \( i \) with respect to attribute \( j \).
- \( E_{ij} \) = Service quality expectation for attribute \( j \) that is the relevant norm for stimulus \( i \).

2.5 Expectancy Disconfirmation Model

The expectancy disconfirmation theory as proposed by Oliver (1980) is shown in Figure 4. The expectancy disconfirmation theory can be conceptualized in four stages. The first stage is the expectation of the product. In the expectation stage, each consumer has a different knowledge level about a product, which leads to a different estimation of the product performance. The second stage is perceived performance in which each consumer develops certain attributions on the product performance. The third stage is disconfirmation, where the perceived product performance is compared with their initial expectations. Disconfirmation happens when there are discrepancies between initial expectations and actual performance that lead to satisfaction or dissatisfaction among consumers. The final stage is satisfaction,
where the measurement of perceived product performance, individual consumer determines whether it is up to their expectation. (Reising and Chandek, 2001 in Norzalita et al., 2011).

![Expectancy Disconfirmation Theory](image)

**Figure 4: The expectancy disconfirmation theory**

Sources: Richard Oliver (1980)

An expectancy disconfirmation theory has been used in various researches especially in terms of measuring the level of tourist satisfaction towards tourism destination. Abd Aziz, et. al. (2011), in their study of international and domestic tourists’ satisfaction of heritage products had used the expectancy disconfirmation approach. The tourist attributes were used as the variables that predicted to influence to the tourists’ satisfaction. Namely, the eight variables travels for tourist attribute were people, overall convenience, price, accommodation and food, commodities, attraction, culture and climate and image. By using an expectancy disconfirmation approach the result showed that tourist’s satisfaction had a significant relationship with expectation, perceived value and satisfaction. Nevertheless, they used another approach (perception-only model) to predict the overall satisfaction.

**2.6 Perceived Service Quality and Satisfaction Model**

The model of perceived service quality and satisfaction by Spreng and Mockoy (1996) is a modification to Oliver’s (1993) model. This model generally attempts to enhance the understanding of the constructs (Seth, Deshmukh and Vrat, 2004). This model is concentrated to the effect of expectation, perceived performance desires, desired congruency and expectation disconfirmation on overall service quality and customer satisfaction.

![Perceived Service Quality and Satisfaction](image)

**Figure 5: Perceived service quality and satisfaction**

Sources: Spreng and Mockoy (1996)

The measured variables are based on a set of ten attributes (convenience in making an appointment, friendliness of the staff, advisor listened to my questions, the advisor provided accurate information, the knowledge of the advisor, the advice was consistent, advisor helped in long-range planning, the advisor helped in choosing the right courses for career, advisor was interested in personal life, and the offices were professional). Their modified model fitted the data well where service quality was hypothesized to influence overall satisfaction. In their study, the path coefficient between two constructs appeared to be significant. (Haksin, Yongki and Dongkeun, 2000).

Ismail, Abdullah and Francis (2009), carried out a study on perceived service quality and satisfaction on customers of industrial product. Their result demonstrated that perceived value had increased the effect of empathy on customer satisfaction, but it had not increased the effect of responsiveness and assurance of customer satisfaction. They argued that a significant relationship between
expectation and perceived value would affect the satisfaction.

3. A Framework to Measure Tourists Satisfaction towards Ecotourism

Tourists’ satisfaction towards ecotourism can be measured by using the various approaches as discussed previously. Satisfaction can be determined by subjective and objective approaches. Fah and Kandasamy (2011) state that satisfaction can be determined by subjective (e.g. customer needs, emotions) and objective factors (e.g. product and service features).

Tourists have a different characters in which can contribute to different expectation and satisfaction towards an ecotourism destination. Dwyer et al. (2006) mention that the different types of tourists, who tend to undertake different patterns of activities, will obviously have different types and levels of impact on a destination. Furthermore, Torres-Sovero et al. (2012) argue that the satisfactory and dissatisfactory levels towards an ecotourism destination are related to tourists’ characteristic such as socioeconomic, cultural factor, and their motivations. Therefore, the elements of tourist characteristic can be used as subjective variables to measure the tourists’ satisfaction. The elements that can be used are socio demographic, information sources, past experience and motivations.

Meanwhile, the objective factors that can determine the satisfaction of tourists are product and services. In terms of ecotourism destination, there are many of service elements that are provided for tourists for example, tour guides, facilities etc. The products in ecotourism site are referring to the environmental, products like for example wildlife, forest, recreation activities and so forth.

Many researchers have identified the cause tourist satisfaction towards tourism destination by using various perspectives and theories. Fah and Kandasamy (2011) use the service quality approach as a tool in their study to measure customers’ satisfaction among the hotel clients in Langkawi. Besides the 5 original dimensions they also include two additional service dimensions namely technological and ecological aspect. The findings are consistent with numerous studies that the five dimensions of SERVQUAL are significantly related to satisfaction among hotel guests. Meanwhile, the ecological factors were also found to be significantly related to customer satisfaction. Thus, the SERVQUAL model can be modified to suit with some variables as long as it is still in terms of service quality aspect. However, the most appropriate approach to measure the satisfaction towards ecotourism sector is Ecotourists’ Service Quality (ECOSERV).

Shuib et al. (2012) use the Ecotourists’ Service Quality (ECOSERV) model in which the ecotangible dimension is used as a variable that affects the satisfaction of tourists towards an ecotourism destination. The ECOSERV model that they propose has included six dimensions which are: ecotangibles, assurance, reliability, responsiveness, empathy and tangibles. Their study has indicated that ecotangible dimension is the causal factor for tourists to be unsatisfied. An ecotangible factor is the sub - dimension from a tangible dimension in SERVQUAL model. An ecotangible is defined as physical facilities and equipment that are safe and appropriate to the environment. It’s used in ECOSERV model that appear to be similar to SERVQUAL with a few expectations (Khan, 2003). Normally, the ECOSERV model is used to analyze service quality for ecotourism destination.

Another researcher who uses the ECOSERV model is Razali et al. (2012). They use the ECOSERV model to measure tourist satisfaction level toward the quality of the service at the Kuala Selangor Nature Park. The ECOSERVE model that is adapted from SERVEQUAL in which the tangible dimension has been recategorized into tangible and ecotangible dimensions and other dimensions are assurance, responsiveness, empathy and reliability.

In this paper a modified framework to measure the satisfaction on ecotourism
destination is suggested as shown in Figure 6. It is a modification based SERVQUAL, ECOSERVE and expectancy disconfirmation theory. In the modified framework, every single ECOSERV element (ecotangibles, assurance, reliability, responsiveness, empathy and tangibles) are adapted into the objective factors (environmental, economic and services).

![Figure 6: Framework of tourists’ satisfaction towards ecotourism development.](image)

Adapted from Parasuraman, Zeithaml and Berry (1988) and Oliver (1980).

The adapted framework shows that the expectations of tourists are affected by their characteristics (socio-demographic, motive, information sources and past experience). The expectation and perceived performance of tourists have both direct and indirect influences towards satisfaction. The disconfirmation happens when there are discrepancies between initial expectations and actual performance that lead to satisfaction or dissatisfaction among consumers. Meanwhile, the level of satisfaction can be measured by determining the gap between expectation and perceived performance.

4. Discussion and Conclusion

This paper explores the approaches to measure the tourist’s satisfaction towards ecotourism development. The SERVQUAL model approach is generally used to measure the service quality in the hospitality industry. Meanwhile, the service quality, customer value and satisfaction approach have been used more to describe the processes of customer decision making. The SERVQUAL, ECOSERVE and expectancy disconfirmation theory model instruments are noticeable to use as an instrument to measure the tourist satisfaction towards hospitality industry and can be modified for ecotourism. This is done by including several variables in terms of environmental, economic, socio-culture facilities and infrastructure. Besides, the expectancy disconfirmation model is more flexible and can be modified with some additional variables such as service quality, product and destination attractions, culture and so forth. Nevertheless, the choice of every single variable from these approaches must be consistent with the scope of ecotourism destination development.

Past studies have used various approaches to seek the relationship between expectation of product or services and satisfaction. There are many variables that can affect customer satisfaction. The management of ecotourism resources in Kilim must take into account customers’ satisfaction to ensure the effectiveness of the development implemented. Any feedbacks and opinions especially from the consumers must be emphasized.
5. Reference


