

APPLICATION OF IMPORTANCE - PERFORMANCE ANALYSIS MODEL IN EVALUATION SERVICE QUALITY OF DIVING TOUR OPERATOR IN NHA TRANG (VIET NAM)

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Abstract: *The purpose of this study is to improve service quality for dive tour operators in Nha Trang (Viet Nam), so the objectives were set to understand the divers' opinion on dimensions of service quality of diving experiences in Nha Trang, and their evaluation of the diving tour operators' performance. Analysis employed the Importance - Performance analysis (IPA) paradigm based on five dimensions and twenty five attributes of service quality (Parasuraman, 1988). The results are significant to dive tour operators because it showed clearly the managerial implications in order to provide a quality service during the dive tourism experience. In details, it indicated that Tangibles, Responsiveness and Reliability were in the quadrant "Low Priority", which means low importance and low performance. Moreover, Assurance and Empathy dimensions had high importance and high performance, so they were in the quadrant of "Keep Up The Good Work".*

Key Words: *Diving tourism, service quality, importance - performance analysis*

1. Introductions

Since the first design in 1943, diving has been developed quickly around the world. PADI report that there are over 20 million divers around the world nowadays. With its great impact to the world tourism industry, it should be considered as mass tourism with adventure tourism spirit (van Treeck & Schuhmacher, 1999)

Started from 1995, Nha Trang is considered as the first diving place in Viet Nam. Compare to others diving destinations in the same region of South East Asia, Nha Trang is just a new player, and obviously facing with very high competition. Service quality has been proved to be a factor that help service firms to differentiate, and leave behind their competitors, so improving service quality become a critical mission for Nha Trang diving tourism industry.

Follow that mission, the first objective of this study is to understand diver

opinion about importance of diving trip based on five dimension of service quality (Tangibles, Responsiveness, Assurance, Reliability, Empathy) (Parasuraman, 1988). Second objective is to examine divers' evaluation of service quality provided by dive tour operator. After addressing the current situations from the Importance - Performance Analysis, this study would deliver recommendations for improving service quality.

2. Literature review

Diving tourism is group under most active adventure tourism with non-competitive. The diving tourist motivations are: risk-seeking, discovery, self-actualization, nature contact, social contact and activities in the nature. Like most of service business, diving tourism service has the same characteristic of tangibility, inseparability, perishability, variability. However, there are still some different points. Firstly, in adventure tourism, personal motivations

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and expectations are various, and it significantly influences customer satisfaction, so understand it is a must for dive tour operator (Swarbrooke, 2003). Moreover, for gaining the best experience, diver should identify their need clearly, so service provider can match them to an appropriate level to make sure the activities give them the best satisfied experience. To make the dive bring out the most satisfied for diver, Barker and Roberts (2004) suggest that diving tour should be in a small group (3 – 5 people), so that diving guide and divers can interact better, and enhance the diving quality.

Importance – Performance (IPA) is an easy and effective service quality evaluation model created by Martilla and James (1977). Over the years, the model has been widely applied in many type of service industry such as: Hotel (Chu & Choi, 1999), convention (Linda & To, 2010), museum service (Lin, 2009). Tour Operator (Hudson, Hudson, & Miller, 2004).

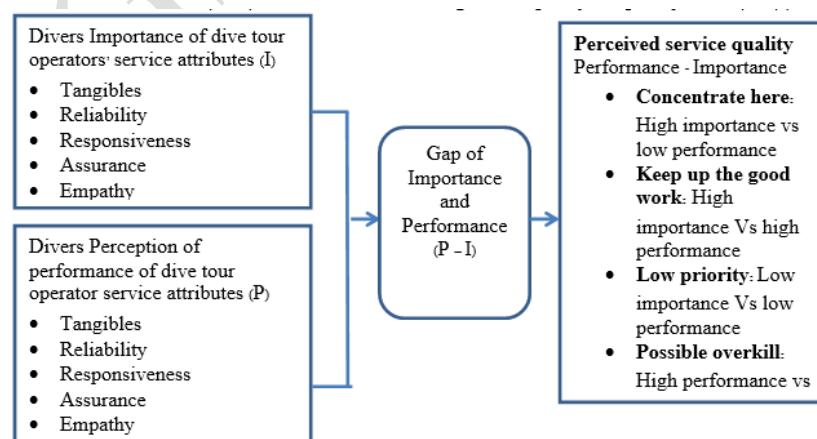
O'Neill, MacCarthy, Williams & Groves (2000) are the first group of

researchers who applied IPA paradigm in accessing service quality in diving tourism. It proved that IPA is applicable in diving tourism, and showed its effectiveness by exactly pointing out for diving tour operator in Western Australia what should be done for improving their service quality. O'Neill, MacCarthy and Adullah took that model and applied again in 2002. It was named DIVEPERF, and pair sample T-test analysis technique was added to show clearly the gap between importance and performance of each attribute, so the diving tour operator can appropriately set the priority for attributes investment.

3. Research Framework and Methodology

This framework of this study is influenced by DIVEPERF model (O'Neill, MacCarthy, Abdullah, 2002), which used five dimensions and twenty five attributes based on SERVQUAL model of Parasuraman (1988), and applied in Importance – Performance Analysis paradigm (Martilla & James, 1977).

Figure 1: Conceptual Framework



Sources: O'Neill et al., (2002). Dive tourism: evaluating service quality. *Hospitality Review*, 20(2).

The meanings of five dimensions are:

Tangibles: Appearance of physical facilities, equipment, personnel, and

communication materials (Parasuraman et al., 1988).

Responsiveness: Willing to help customer and provide the prompt service (Parasuraman et al., 1988).

Assurance: Knowledge and courtesy of employees and their ability to convey trust and confidence (Parasuraman et al., 1988).

Reliability: Ability to perform the promised service dependably and accurately (Parasuraman et al., 1988).

Empathy: Provision of caring individualized attention, which the firm provides its customers (Parasuraman et al., 1988).

This study has five hypotheses.

H1a: There is a significant difference between divers' importance and diver perceptions' about dive tour performance in terms of tangibles.

H2a: There is a significant difference between divers' importance and divers' perception about dive tour performance in terms of reliability.

H3a: There is a significant difference between divers' importance and divers' perception about dive tour performance in terms of responsiveness.

H4a: There is a significant difference between divers' importance and divers' perception about dive tour performance in terms of assurance

H5a: There is a significant difference between divers' importance and divers' perception about dive tour performance in terms of empathy

A hypothesis is created to provide the guidelines on what and how, data are collected and analyzed (Malhotra, 2007). Since the purpose of this study is to assess the importance that divers concern while participating diving tour and, their evaluation on diving tour operator. The hypotheses will be used to measure the service quality on each attributes and on

five dimensions: tangibles, reliability, responsiveness, assurance and empathy.

According to Nguyen and Thai's study (2013), there are approximately twenty thousand divers who participated in Nha Trang MPA in 2013. Due to difficulty of reaching all of them, researcher decided to use to sampling method of Zikmund (2013), which provided the appropriate calculation the sample size with a 95% confidence level and a tolerable error of ± 5 for unknown population, and the sample size is three hundred-eighty-five respondents. This is a purposive sample method, which means non-random way of selection. In this case, respondents had to be participators in the diving trip, which were selected by diving tour.

The questionnaire contain four parts: divers' importance (divers' opinion about important attributes in service quality), tour operator performance (divers' perception about tour operator performance), demographic and divers' experiences.

Divers were asked to complete the first part of the twenty five items questionnaire prior to experiencing the dive. They were requested to evaluate the level of importance of each service quality attribute and dimension. Later the same respondent was requested to complete similar 25 items questionnaire (with identical attributes and items but measured on different scales) prior to leaving dive tour operator's premises. The perception levels of the service quality dimensions were measured on a five point Likert scale between not at all Important and very Important (part I), not at all satisfied and very satisfied (part II).

In the aim of figuring out any potential mistakes and problems (Zikmund, 2013), forty questionnaire were distributed in September 2014 in Nha Trang. The researcher used the Cronbach coefficient

Alpha scales in the SPSS program (version 19) for analyzing the pre-test. The result of the test ranged from 0.1 to 1.0, which means

the least and most reliable. The suggested reliability level is more than 0.6 (Anderson, 1996; Sekaran, 2000)

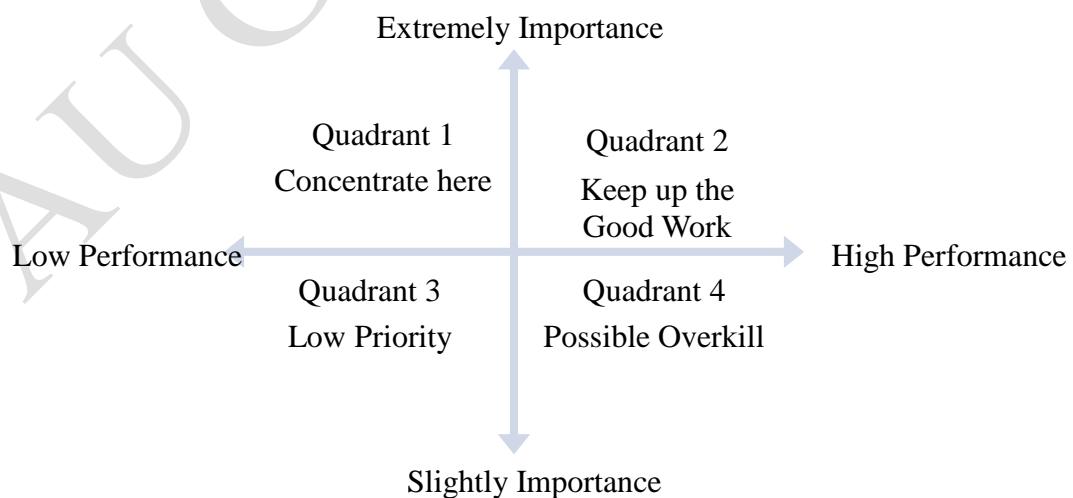
Table 1: Reliability Test

Reliability Analysis Scale for Importance		
	Cronbach's Apha	Number of Items
Tangibles	.838	5
Responsiveness	.898	3
Assurance	.900	7
Reliability	.803	3
Empathy	.921	7

Firstly, IPA needs a number of attributes and factors, which are collected from previous studies at the same field. Then, those attributes will be evaluated by respondents for two sections, before and after service experiences. In the “before experience” section, respondents will evaluate the importance level of each attributes in their opinion. After experience the dive, the same respondent will evaluate tour operator performance based on the

relative attributes. The researcher then identifies the mean of each part – Importance and Performance. Finally, the presentation of the analyzed results, which illustrate in an axis of the grid, directly tell the dive tour operator what is most important to customer and how well of their performance. Especially, the model can monitor which attributes consume too many resources and which ones are lacks of investment.

Figure 2: Importance - Performance Analysis Grid



Source: Martilla, J. A., & James, J. C. (1977). Importance-performance analysis. *Journal of Marketing* (pre-1986), 41(000001), 77.

The quadrant that attributes are located will tell exactly the attributes situation.

Quadrant 1: Concentrate here: the area that has high importance but low performance, the dive tour operator should put additional effort for improve the attributes. Attributes in this quadrant have importance means greater than the grand mean, but performance means is less than the grand mean.

Quadrant 2: Keep up the good work: the area that concern as highly important and the dive tour operator performance is accordingly as high as the importance. Attributes in this quadrant have importance means higher than the grand mean, and performance means is also higher than the grand mean.

Quadrant 3: Low Priority: the area that contain attributes which is important level and performance is likewise low. Attributes in this quadrant have importance means lower than the grand mean, and performance means is also lower than the grand mean.

Quadrant 4: Possible overkill: the attributes that was invested much more effort than what guest concern as important. Service firm should reduce resource for this attributes to save resources. Attributes in this quadrant have importance mean lower than the grand mean, but performance means is greater than the grand mean.

4. Results and Discussion

The number of questionnaire collected in return is 392 set, achieved and the response rate is 80%. Among the 392 respondents, 73.2% of them were male and 26.8% were female, most of them were in under the age range from 26 to 45 years old (76.5%), who have a high education level

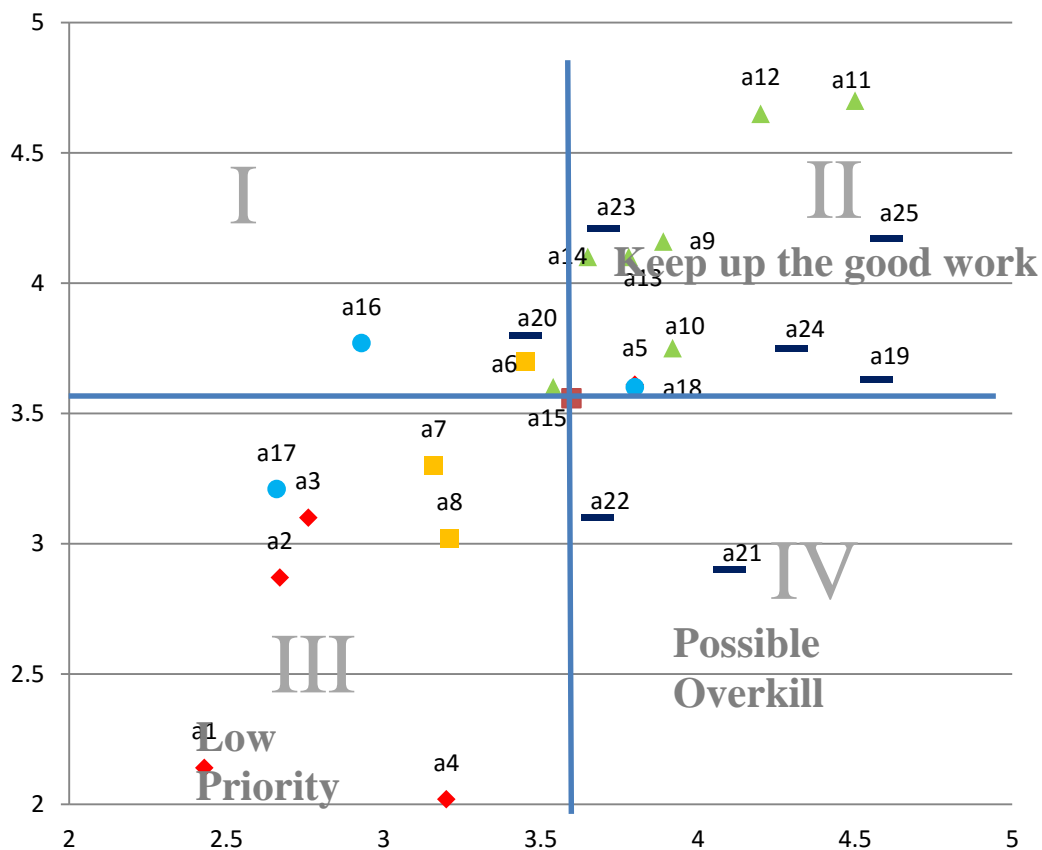
(84.5% have at least a bachelor's degree). The demographic results showed a similarity to studies on diving tourism that was already studied before (Bennett, 2002; Musa, 2002; M. O'Neill et al., 2002); Skin Diver, 1989).

The survey asked the respondents to rate both importance of the dive trip and how well the dive tour operator performed based on five dimensions of service quality, those are Tangibles, Responsiveness, Assurance, Reliability, and Empathy (Parasuraman et al., 1988). For importance rating, the two most important attributes that concerned by divers are "diving guide makes divers feel secure" (4.7) and "dive tour operator has no compromise on safety" (4.65). It is clear that divers are very concerned about safety while participating in the dive tour. The two least important attributes for divers are "neat appearance of diving guides" (2.02), "visually appealing appearance/décor" (2.14). It means divers did not care much about the appearance.

For performance evaluation, the top three highest scores belong to these attributes: "Diving guide makes dives more enjoyable" (4.6), "diver feels more convenient than on own" (4.57), and "diving guide make divers feel secure" (4.5). The attributes that show least satisfaction are "visually appealing appearance/décor" (2.43), and "diving guide deliver service to divers on time" (2.66).

The results of this study show that security attributes such as: secure level, experienced diving guide, and diver confidence levels are more important than appearance and relational attributes for example: individual care, courteous level. Interestingly, the study of O'Neill et al. (2002) in diving tourism in Australia gave the similar outcome.

Figures 3: Presentation of Attributes



In dimension perspective, the strength points of the diving tour operators in Nha Trang are Assurance and Empathy, and the dimensions that should be set as low priority are Tangibles, Responsiveness and Reliability.

On the positive side, performance is higher than importance, there are eleven attributes. The two attributes that had widest distance were “divers are treated like special individuals” (1.2) and “neat appearance of diving guide” (1.18). Moreover, the closest gap were “diving guide is always willing to help divers” (0.19) “good facilities and equipment to carter for diver” and “diving guide always keep customer informed” (0.17).

On the other hand, the negative side, when performance is lower than importance, there are fourteen attributes. The greatest difference belongs to the

attribute: “Diving guide got thing right at the first time” (-0.84). The minimum distance is the attribute “Consistently courteous diving guide” (-0.06).

Tangibles dimension and Empathy dimension had a high performance, which was more than importance level. The highest difference was Empathy (0.40531) and the lower was Tangibles (0.22347). On the other side, Responsiveness, Assurance and Reliability dimension are performed less than what divers felt important. The widest gap was Reliability (-0.39), Assurance (-0.224), and Responsiveness (-0.062) are followed respectively. Furthermore, two-tailed significant test do reveal that these differences are nonetheless significant at the level $p < 0.05$ in case of four out of five dimensions assessed (except Responsiveness).

Table III: Hypothesis Testing Results

Hypothesis	Dimensions	Importance Mean	Performance Mean	Performance minus Importance	t value	Sig. (2-tailed)	Results
H ₀₁	Tangibles	2.7469	2.9704	.22347	.064	.000	Rejected H ₀₁
H ₀₂	Responsiveness	3.3376	3.2757	-.06189	-.247	.296	Failed to reject H ₀₂
H ₀₃	Assurance	4.1512	3.9272	-.22393	-.250	.000	Rejected H ₀₃
H ₀₄	Reliability	3.5295	3.1340	-.39548	-.206	.000	Rejected H ₀₄
H ₀₅	Empathy	3.6514	4.0567	.40531	.082	.000	Rejected H ₀₅

4. Conclusions and Recommendations

First of all, it can be concluded that for divers who participate in diving activity in Nha Trang, Safety and Secure, or Assurance dimension is the most important, followed by Empathy, Reliability, Responsiveness, and Tangibles. The attributes that they are concerned most is “diving guide make diver feel secure” (4.7). However, the highest performance provided by tour operator is Empathy, or caring and individuals attention. Assurance Responsiveness, Reliability, and Tangibles are followed, respectively. The best performance attributes belong to “Diving guide made dive more enjoyable” (4.6).

Tour operator seems to be careless in Reliability dimension, that is why there is a wide gap in this dimension, and the furthest distance is on attribute “Diving guide got thing right at the first time”. Interestingly, Tangibles dimension is perceived low priority from both side divers and diving tour operator services.

The similarity of diver's profiles showed that, over the years, characteristics of diving tourists do not make any

significant change. They are young, highly educated, from the urban areas, and usually white collar workers. They are risk-takers, self-achievers, and prefer adventure in outdoor environments.

In diving tourism industry, Nha Trang diving tour operators are the new players (Lindsey & Holmes, 2002). However, they already had a certain understanding about the need of divers. The results of the data analyzing show that tour operators performed well in the levels that divers felt was important, for example: the Empathy and Assurance dimension had high importance level and diving tour operator performance brought high satisfaction as well. On the other sides, Tangibles, Responsiveness, and Reliability dimension have low levels of importance, and diving tour operators also performed according to that level.

Most of the assessed attributes did not need intensive care (19/25 attributes). Especially, eleven attributes in the Quadrant II could be seen as strength of diving tour operator in Nha Trang such as: “Good facilities and equipment to carter for

diver", "Diving guide considers divers' best interests at heart", "Diving guide always keeps customer informed", "Diving guide makes divers feel secure", "Dive tour operator makes no compromise on safety", "Knowledgeable diving guide", "Behavior of diving guide gives confidence to diver", "Diving guide interested in solving divers' problems", "Diver feels more convenient than on own", "There is no excessive waiting time for diver", "Diving guide attends to diver's needs promptly". Weber (2000) suggests that attributes that have high importance and high performance are the strength of the organization, and it should be competitive advantages in the long term.

However, there are some attributes that are still needed to be rearranged in terms of resources for improving the service quality. Particularly, the attributes that need more investment are in the Quadrant of "Concentrate Here" such as: "prompt service from diving guide", "consistently courteous diving guide", "diving guide got thing tight at the first time", and "diving guide understands the specific needs of divers". Those attributes had high level importance but performance from diving tour operators did not achieve to the sufficient level. The attributes "diving

guide got thing right at the first time" should be taken care on most because it has a greatest gap between performance and importance.

At the same time, the attributes of individual care like "diver is treated like special individuals" and "diving guide give an individualized attention to divers" should be viewed as potential strength because of its high performance, but the level of resources investment priority should be reset to be lower.

This study could not access the group of divers, who do not understand English, Russian, Vietnamese, because the questionnaire is set only in that three languages. Moreover, this was conducted during the September 2014 to February 2015, so it cannot explain the guest attitude in the whole years round. Furthermore, this study only focuses on improving service quality for dive tour operator without judging customer satisfaction and customer retention. In diving tourism, customer satisfaction is came from many factors (Ince & Bowen, 2010; Maccarthy, O'Neill, & Williams, 2006).

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