
Research Article

Tourist Satisfaction towards Kota Kinabalu, Sabah Using Importance-Performance Analysis (IPA) As a Tool to Determine Urban Ecotourism Potential

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Abstract

The Importance-Performance Analysis (IPA) is widely used in many fields of study as it produces simple and straightforward results. However, it is rarely used by managers of ecotourism and urban green spaces. Importance-Performance Analysis (IPA) was adopted from a destination perspective to understand industry demand. This study explores the visitors' satisfaction level on ecotourism attributes i.e. attraction, urban green spaces and accessibility that affect tourist satisfaction towards Kota Kinabalu, Sabah, Malaysia using IPA scheme. A total of 384 tourists to Kota Kinabalu were provided with a list of environmental features and asked to rate the importance of and satisfaction with each attribute. IPA was performed to compare mean scores and identify areas of concern. The analysis identified eight (8) attributes which were applauded with excellent performance on highly important features and should maintain its competitiveness as a tourist destination. Six (6) attributes resulted under the poor performance on an extremely important category; indicates the areas that should be given improvement interventions, while four (4) attributes were identified as possible overkill that implies divergences of resources elsewhere are needed. Finally, six (6) attributes faired as low in priority and effort may not be necessary on those features. Although six (6) out of 24 attributes were found to be less advantageous, an interview simultaneously conducted during the survey however found that 97% of respondents perceived that Kota Kinabalu city has the potential as an Urban Ecotourism destination. This study resulted in some findings for those at managerial level to pursue and areas that should be improved as it provides a greater understanding on the Urban Ecotourism potential in Kota Kinabalu industry, by using the Importance-Performance Analysis (IPA) tool as it facilitates the interpretation of data. This study fosters that ecotourism product does

exist in Kota Kinabalu city, and steer the industry towards sustainable development in urban centres.

Keywords: Importance-Performance Analysis (IPA), Kota Kinabalu, Tourist motivation, Tourist satisfaction, Urban Ecotourism

Introduction

Sabah is known for its mega biodiversity thus the abundant ecotourism sites, focused mainly in the outer part of the city offering unique and niche market to tourists. With world class recognition by UNESCO, RAMSAR or even as National Heritage or National Park, tourists throng the destinations as marketed by tourism managers. As such, overcrowding or carrying capacity issues shall prevail without proper planning for certain areas of interest. Latip (2016) noted that environmental degradation is perceived to continue from tourists' activities in the Kinabalu Park, Sabah through ongoing tourism activities. A few studies showed that the steady increase number of visitors to the islands in Tunku Abdul Rahman Park, Kota Kinabalu is also a contributor to the detriment of the marine environment (Kaur, 2006; Kunjuraman, 2015). To reduce overcrowding at certain specific tourist attractions, the Sabah State Government is always looking for ways to overcome this problem. Introduction of new market niche and attractions are essential to best manage overcrowding and carrying capacity problem (Ministry of Tourism, Culture and Environment Sabah, 2017). Joppe & Dodds (2000) mentioned that urban ecotourism could assist ecological and cultural protection, through which the target is to increase environmental awareness and local economic development in cities. Other than protection and prevention, urban ecotourism also have elements that contribute towards conservation through restoration of natural areas degraded by previous human activities (Hingham & Lück, 2002).

In 1996, Mok & Armstrong noted that there were knowledge limitations on new travel destinations among tourists thus the dependency on social media groups for information and in determining destination attributes. Destination attributes described by Truong & King (2006) indicated that attraction attributes could be distinctively separated between natural attractions (sea, forest, mountains, lakes and river etc.) and man-made attractions (museums, palace, ancient monuments, theme parks, and casinos etc.). The importance of assessing accessibility and accommodation facilities were noted as an important attribute of any tourism industry (Upadhyaya, 2012). Later on, a study by Lo et al. (2013) categorized four main attributes i.e. (1) Cultural/Heritage, (2) Social, (3) Economic and (4) Environment and these were important destination image

indicators. Collectively, strengths and weaknesses of destination attributes lead to competitiveness success of a travel destination (Enright & Newtown, 2005, Chalal & Devi, 2015). Performance of a travel destination thus is determined by tourist perception and satisfaction. Tourism is an economically promising industry however, it is a very exhaustive and consumptive trade (Joppe & Dodds, 2000). Economic impact is not the only important impact tourism can have as it also impacts the environment, people and culture. Tourism requires development of infrastructures, and pollution comes from the increased number of visitors (Kozak, 2003). It was also noted in another study that this industry also damages the environment in various ways especially with regards to water resources and solid waste (Firehock, 2015).

Various literature have mentioned that natural biodiversity inarguably has many functions for humans and the ecosystem. Natural biodiversity has a positive effect on the functioning and stability of ecosystems where human and nature support each other for a living (Tilman et al., 2014). In Sabah, Kota Kinabalu city's urban forests and green spaces function as wildlife habitats, and act as nature conservation, protection, recreation and utility for the community and environment (Mojiol, 2006). Over the years, urban expansion was unstoppable and natural areas were jeopardized to make way for development, changing land use and land cover pattern and placing natural biodiversity at risk. However, depending on the uniqueness of the earth surface combined with the perceived value of an ecosystem, a good minimum size of forest cover that supports high native diversity could be determined (Firehock, 2015). This sheds some hope of preserving urban green spaces that still exist, becoming the very reason tourists travel to Sabah.

Urban ecotourism shares the same goals as the conventional ecotourism term, however the former is located in the city. This growing trend reconciles concrete and nature. It is the new hype among travelers who seek travel experience and at the same time pursue opportunities to give back to the community. Cities around the world have always been the most popular tourist destinations and the centre of travelers' destination due to various reasons. High population density within a small area makes it possible for multicultural exchanges, attracting different types of tourists (Bock, 2015). Cities are also the entry and exit point of countries through modern transportation systems. Bock (2015) mentioned that modernization including Information and Communication Technology (ICT) has facilitated information dissemination among tourists, and impacted tourist behaviour and characteristics. For the past 20 years, ecotourism has been a major tourism motivation in Sabah and has grown rapidly.

With time, the industry has raised concerns over the sustainability of the trade while not restricting physical and social development for the local people. Is Urban Ecotourism the answer for tourism sustainability in Kota Kinabalu?

In order to preserve nature in the city without deterring the booming tourism industry, managers should look into various aspects to better manage and plan for sustainable tourism in Kota Kinabalu. Understanding current travel characteristics, motives and behaviour of tourists are important to better strategize tourism products and marketing (Chalal & Devi, 2015; Van Vuuren & Slabbert, 2015). Human characteristics and behaviour changes over time and it is important to stay updated on current information and trends and for this, latest studies should always be welcomed by managers. Changes in travel characteristics, behaviour as well as motives could result in changes of tourists' perception and expectation during their travels. Tourist satisfaction eventually takes place after experiencing a travel and it is commonly the driving force behind the competitiveness and performance of a travel destination (Kozak, 2003; Mat Som et al., 2012). Therefore, it is important to understand the current market demand in Kota Kinabalu to correctly place marketing strategies for the benefit of all stakeholders. This paper adopts the Importance-Performance Analysis (IPA) scheme in order to simultaneously investigate the motivation and satisfaction of tourists towards Kota Kinabalu city from a "destination" perspective, through which environmental features and settings were profoundly explored. It also intends to understand the city's potential as another urban ecotourism destination. Results could guide tourism managers to improve sustainability of the tourism industry through strategic recommendations of this study.

Importance-Performance Analysis (IPA)

This paper assumes a method introduced by Martilla & James (1977) i.e. Importance-Performance Analysis (IPA) as a tool to measure the performance and satisfaction of tourists regarding their recent travel to Kota Kinabalu city. Researchers in the field of tourism try to identify and explain the factors that affect the choice of destination as well as the satisfaction of tourists after their trip. Tourist satisfaction issues in tourism industry must be taken into serious consideration as the number of empirical studies relating to tourist satisfaction is limited and less documented (Salleh et al., 2011; Al-Ababneh, 2013; Hussin & Kunjuraman, 2014). Tourist satisfaction reflects tourism industry performance in the particular area of interest. Tools are therefore needed to help managers to grasp and evaluate by looking at respondents' expectation (importance) and satisfaction (performance). The IPA method is superior to a performance-only

approach as it measures both expectation and satisfaction of respondents. IPA has been widely documented and used in diverse context including marketing (Ennew et al., 1993; Matzler et al., 2003), healthcare (Dolinsky & Caputo, 1991; Nitse & Bush, 1993) and tourism (Uysal et al., 1991; Duke & Persia, 1996; Wilkins, 2010; Söresson & von Friedrichs, 2013). Chu & Choi (2000) mentioned that IPA aids to identify customers' level of satisfaction with the attributes that were derived by their expectation regarding the attribute's performance. IPA was used as early as 1985 by Lewis to gain tourist's perception towards the hotel industry, followed by another study on customer satisfaction towards Sheraton Hotels in 1989 and resulted in tourism policy formulation. Tourism sectors on specific tourism services, e.g. whale shark tourism, ski-resort, outdoor recreation etc. (Ziegler et al., 2012; Ahmad Puad et al., 2012) are also known to use this method but lacks in terms of studies on adopting a destination perspective (Edward & George, 2008; De Nisco et al., 2014) and in protected areas (Wade & Eagle, 2003). According to Wade & Eagle (2003), it is known that national parks rarely monitor visitors' satisfaction or when they do, park performance was normally measured without reviewing the importance of the attributes towards the visitors. Although the IPA are widely used in various fields to determine a service performance, it is rarely used to enhance management (Parker & Simpson, 2018). The IPA manages to express the relationship between two dimensions -- expectation and satisfaction. It determines champions and under-servicing fields. Service sectors i.e. the tourism and hospitality industry has noted that IPA is an easy and simple tool to determine fields to improve or reduce when resources are limited (Babu et al., 2017). Straightforward visual results of the IPA assist to interpret attributes, and are an efficient way for managers to have evidence-based action plans.

Methodology

Data Collection

Kota Kinabalu is the capital city of Sabah state in Malaysia. Sabah is renowned for its beautiful and pristine nature thus attracting tourists from around the globe. This study was conducted through self-administered survey questionnaire that was developed to identify factors influencing international and domestic tourist travel to Kota Kinabalu. A total number of 384 samples were collected between December 2017 and December 2018 at the Kota Kinabalu International Airport, Jesselton Point Waterfront, i.e. exit points of the city and Gaya Street, where tourists ending their vacation in the city were interviewed, with 95% confidence interval and 5% margin error (Salant & Dillman, 1994). Based on Sabah Tourism Board (2016), the estimated number of tourists exceeds 500,000

people thus the total number of sample required is 384 respondents (Krejcie & Morgan, 1970).

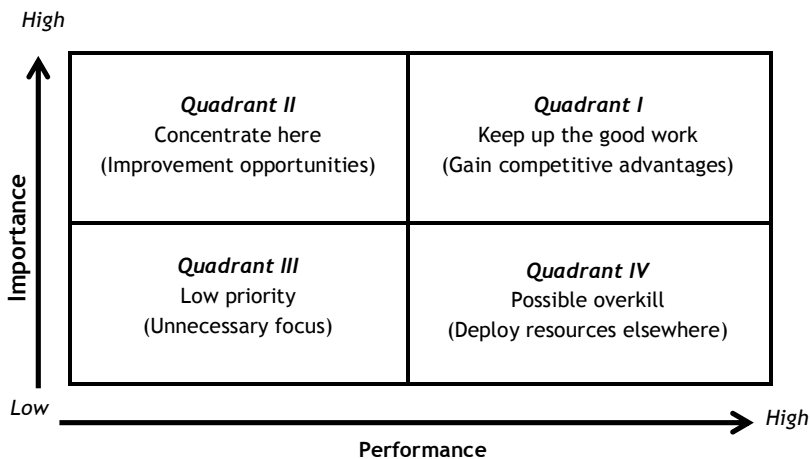


Figure 1. The IPA scheme

The questionnaire was developed through literature reviews and later on divided into three main categories i.e. attraction (Rabanny et al., 2013; Chalal & Devi, 2015; Van Vuuren & Slabbert, 2011), green barrier (Mihanyar et al., 2015; Rabanny et al., 2013) and accessibility (Kuong & Truong, 2017; Chalal & Devi, 2015; Van Vuuren & Slabbert, 2011). Prior to the pilot survey, questionnaire reliability was tested and showed significant p -value less than 0.05 and suitable Cronbach's value, $\alpha = 0.877$ which expressed suitable internal consistency (Pallant, 2016). The questionnaire retained all questions and another seven (7) attributes were added as perceived of importance, gained during the pilot survey. The added questions were of importance as the issues / attributes arising from respondent's point of view and could add value to the study when probed further. The questionnaire was again tested for reliability and validity before the actual survey, and showed significant p -value = 0.00 and acceptable Cronbach's value, $\alpha = 0.961$.

The survey instruments were mainly aimed to identify travelers' perception towards the performance of Kota Kinabalu as a tourism destination using a close-ended questionnaire, in four languages (Chinese, English, Japanese, and Korean); reviewed by proofreader service. The surveys were also assisted by translators consisting of tour guides and research assistants that helped respondents better understand the purpose of the study. The questionnaire was

divided into two parts i.e. expectation and satisfaction of destination attributes and demographic variables of the respondents which helps to describe performance of destination with regards to social and environmental sustainability. The first part of the questionnaires covered attractions of Kota Kinabalu city i.e. the nature attractions (seven items), management of ecotourism destination (seven items) as well as access to ecotourism destinations (10 items) in the city. Respondents were required to indicate their agreement with the statements provided and were assessed with a 5-point Likert scale to get the best spread of results (Kozak, 2001; Saib et al., 2016). The instrument represented two (2) scales for measurement, i.e. to measure performance and another scale to measure the importance of the attributes. The last part poses questions regarding demographic profiles of respondents including a question regarding their perceived opinion on ecotourism potentials of the city. One sample t test and paired sample t- test were conducted to find if there is any significant difference in the mean importance and performance of destination attributes. Data collected were analyzed using SPSS version 24.0.

Data Analysis

All 384 questionnaires were transferred into Microsoft Excel datasheet. Demographic data and travel characteristics of all respondents were analyzed using this software and presented in the results (Parker & Simpson, 2018). Mean data of performance and satisfaction for each attribute were analyzed and recorded.

All data were transferred to Statistical Package for Social Sciences (SPSS) software and correlation, reliability and significance between the importance and performance were checked for all 24 attributes (Parker & Simpson, 2018; Cohen, 1988). The IPA scale is presented graphically as a grid with four quadrants and centered using the grand mean of the importance and grand mean of the performance for all attributes. Each attribute mean value is plotted on a graph with performance on the x-axis and importance on the y-axis. The grand means for performance and importance scores is the point of intersection between axes representing both performance and importance. This points then divides graphs into four (4) grids (quadrants). These quadrants deliver transparency between expectation (importance) and satisfaction (performance) of respondents. It assists in showing priority for management and action plans on the attributes.

The IPA approach uses graph quadrants by comparing the mean scores of the attributes for importance-performance in two-dimensional grids. Four quadrants

represent four different management suggestions (Figure 1). Both high in performance and importance items falls under Quadrant I (Keep up the good work) shows opportunities for gaining or maintain competitiveness advantages, while dimensions poor in performance but high importance attributes represents opportunities for great improvement (Concentrate here - Quadrant II). Quadrant III (Low priority) indicates that no necessary efforts should be focused in that area as both performance and importance are very low. Finally, attributes in Quadrant IV shows high performance, low importance and are considered unnecessary and should be deployed somewhere else (Wu et al., 2010).

Results and Discussion

Sample characteristics

Findings shows that a majority of respondents were female (56%), between the ages of 22-37 years (64.5%), and topped by tourists from South Korea (29.3%), a vacation trip as their travel purpose (37.4%) and spent between RM3,000 - RM4,000 (35.9%) per person for this travel to Kota Kinabalu. A major 97.4% of the respondents perceived that Kota Kinabalu city has the potential to be an Urban Ecotourism destination.

Observing both expectation and satisfaction of tourists is the efficient way to assess the success of a travel destination. Positioning means scores vertically and horizontally on scale assists in judgement, in which the cross-point was set at the grand mean importance and grand mean performance values (Martilla & James, 1977; De Nisco et al., 2014; Saib et al., 2017).

Perceived importance and performance of different items were obtained through mean scores of tourists' perception and results for this study as shown in Table 2. The highest mean score of 3.89 for importance was "personal safety and security" and "meeting locals" while the highest mean score for importance was "unspoiled nature", scored 3.71. Malaysian government tax was identified as the lowest mean score for both importance and performance. The analysis also showed that none of the performance mean scores exceeds the importance mean scores for each item which indicates that performance did not exceed tourists' travel motivation to Kota Kinabalu city. Table 3 shows that there is a significant difference in the mean importance and mean performance of destination attributes as perceived by tourist to Kota Kinabalu. All 24 items mean scores were plotted on the IPA matrix as shown in Figure 2. The grand mean scores for both importance (3.7833) and performance (3.4754) were used as reference in the grid for IPA charting.

Table 1. Demographic profile and travel characteristics

Gender	%	Age group	%
Female	56.0	22 - 37 years old	64.5
Male	44.0	38 - 52 years old	24.9
		18 - 21 years old	9.9
		53 - 71 years old	0.7
Top 5 countries of residence		Total expenses (per pax)	
Korea	29.3	RM 3,000 - 4,000	35.9
China	23.8	RM 2,000 - 3,000	21.6
Malaysia	9.9	RM 1,000 - 2,000	17.2
Other EU Country	7.3	< RM 1,000	16.5
Japan	6.6	> RM 4,000	8.8
Travel purpose		KK potential as Urban Ecotourism destination	
Touring	37.4	Yes	97.4
Travel stopover	22.3	No	2.6
Destination Travel	20.1		
Pass Through	7.3		
Business trip	4.8		
Visiting friends / relatives	4.8		
Others	3.3		

Importance-Performance Analysis (IPA)

The IPA matrix (Figure 2) shows that the highest number of eight (8) items falls into the *keep up the good work* (Quadrant I), that includes unspoiled nature, uniqueness of nature, interaction with local people, quality of destination, culture and history, recreational activities offered, destination access and involvement of locals in ecotourism. Highest in both importance and performance scores indicates that these are strengths of the attributes owned by Kota Kinabalu city. It is also the destination appeal of tourists where destination marketers should focus on. Well-kept nature correlates with the quality of the ecotourism sites; thus, these two items should be maintained or better still enhanced and marketed well to attract more tourists to the city. Preserved and maintained natural ecosystem in the city for tourism could also create conservation opportunities for this city, and ecotourism works both ways. Decision makers of the city should consider protecting the city's nature as it is the reason tourists visit Kota Kinabalu. Observation also shows that involvement of local communities in ecotourism as well as diversity of local culture and history are high in importance for tourists, however, did not score well enough in performance. Tourists' expectation on these two-local community-involving items were high before coming to Sabah, however their personal experience did not match their expectations. These are the areas that should be focused on by

tourism players to improve their commitment and services offered. Focus on core strength would gain competitive benefits in sustainability practice and create better image. Educating tourism players about the importance of sustainability practices is a great opportunity that should be taken on. All eight items in this quadrant should be placed appropriately for Kota Kinabalu city to gain competitive advantages to other travel destinations and would result in repeat visits (Ziegler et al., 2012). Strengthening all items in this quadrant could mean more economic and tourism benefit for the state and its people.

Quadrant II (*concentrate here*) captured six (6) items i.e. overall cleanliness of destination, personal safety and security, transport networks within the city, basic infrastructure facilities at destination, quality of accommodation and environmental awareness among local people. These items were perceived to be high in importance however did not perform well. Destination managers should be looking into these areas as destination strength opportunities for improvement is very substantial. Personal safety and security as well as overall cleanliness were the two (2) items that was highlighted as they were the items that were close to the performance grid line, thus should be scrutinized properly to increase their performance. Cleanliness of the city was also found to be a prolonged issue that has yet to be solved by the local authority (Kunjumaran et al., 2015). Taken as a whole, all these elements in this quadrant seem to represent the first areas of intervention in order to improve the perceived tourist's satisfaction. Attributes mentioned in this category have high potential in giving a good destination image if these are improved, and could move to Quadrant I.

Quadrant III (*low priority*) which depicts low in both importance and performance gathered six (6) items; local government tax, cultural and other events offer, destination guides (map and signs), local cuisine, shopping and entertainment, overall experience gained, and overall expenditure spent. Placing efforts and resources here would be exhausting and may offer little advantage to the urban ecotourism industry. Although items seem unimportant at this moment, there is always opportunity for improvement especially the elements of overall experienced gained with the overall expenditure spent during their travel in the city. Specific segmentation study could be done to explore the possibilities for improvement to create a niche market of gastronomy and entertainment of local culture as well as how to improve experience satisfaction of tourists. Overall, these items appear less significant for now if compared with items in other quadrants. When resources are limited,

managers could focus on attributed charted in Quadrant II before focusing in this quadrant.

Finally, four (4) items that were low in motivation, but high in performance are management of ecotourism destinations, linkages between destinations, number of destinations and the size of each ecotourism destination offered. This quadrant (*possible overkill*) meant that resources are better focused on other issues. Items here are perceived to be good but not an important attraction element. However, managers should maintain their effort level here as opportunity arises to generate more tourist interest (motivation) on these items which would eventually boost its position in the quadrant.

Table 2. Mean scores of tourists' perception

Attributes / Items	Importance Mean	sd.	Satisfaction Mean	sd.
<i>Environmental and setting features</i>				
Unspoiled nature	3.86	1.019	3.71	0.897
Nature uniqueness	3.85	0.968	3.60	0.879
Overall cleanliness	3.88	0.991	3.44	0.895
Diversity of culture & history	3.82	0.962	3.53	0.880
Meeting locals	3.89	0.946	3.63	0.884
Cultural & other events	3.76	0.934	3.46	0.863
Recreational activities	3.79	0.927	3.56	0.848
<i>Management of ecotourism destination</i>				
Destination quality	3.84	1.017	3.69	0.851
Destination variety	3.70	1.013	3.62	0.864
Destination size	3.70	0.951	3.52	0.855
Environmental awareness amongst local people	3.83	0.979	3.40	0.907
Involvement of local people in ecotourism	3.82	1.005	3.50	0.909
Destination linkages	3.73	1.000	3.51	0.897
Destination management	3.77	1.014	3.52	0.909
<i>Access to ecotourism destination</i>				
Destination access	3.79	1.032	3.55	0.944
Destination guides (maps & signs)	3.73	0.973	3.36	0.894
Transport network (infrastructure & service)	3.84	1.003	3.36	0.918
Destination facilities (basic infrastructure)	3.80	0.961	3.35	0.909
Accommodation quality	3.80	0.938	3.44	0.947
Local cuisine, shopping & entertainment	3.73	0.951	3.35	0.929
Personal safety & security	3.89	0.980	3.46	0.993
Malaysian government tax	3.50	1.029	3.12	0.989
Overall expenditure	3.73	0.916	3.37	0.959
Overall experience	3.75	0.972	3.36	1.006

Table 3. Table showing One-Sample t-Test for Mean Importance and Performance of Destination Attributes.

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Importance mean	24	3.7833	0.08386	0.01712
Performance mean	24	3.4754	0.13194	0.02693

One-Sample Test						
Test Value = 0						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Importance mean	221.027	23	0.000	3.78333	3.7479	3.8187
Performance mean	129.042	23	0.000	3.47542	3.4197	3.5311

As such, management of ecotourism destinations, linkages between ecotourism sites within Kota Kinabalu city, the number of destinations in the city as well as the size of each ecotourism destination could be better enhanced. At the same time, conservation and preservation of the natural ecosystem in the city could be a positive sign that could create an opportunity for awareness and education among tourists and locals. Gaining more motivation and expectation in this area would mean opportunity for attributes to be charted in Quadrant I in the future. When tourist expectations are met, satisfaction would follow, in which the city is doing good at the time the study conducted.

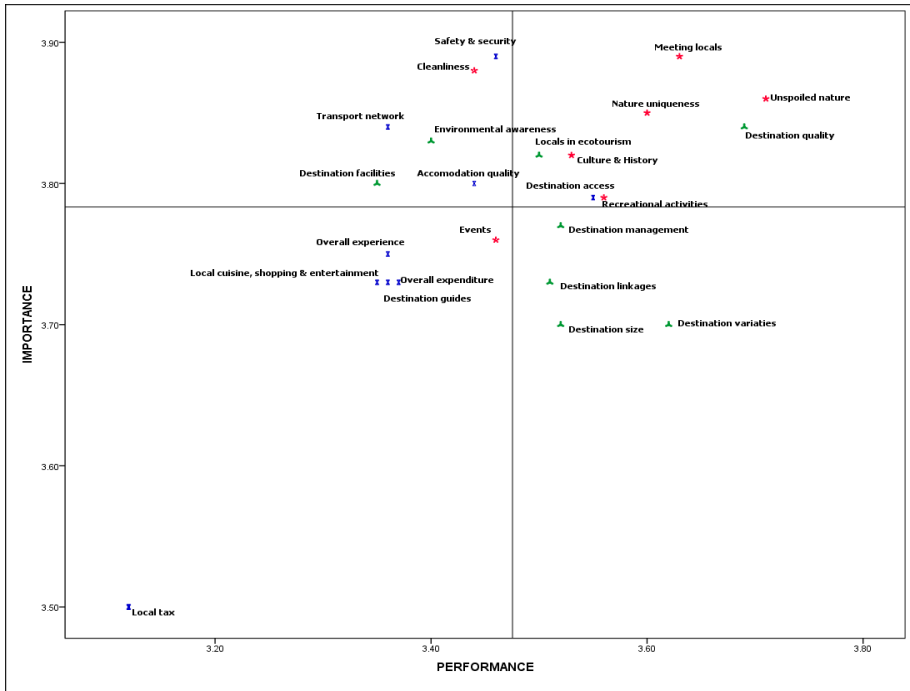


Figure 2. Performance-importance matrix

Managers of Kota Kinabalu city tourism must understand this study to gain insight of competitive advantage. This method demonstrates that tourism managers could adopt an easy and straightforward approach when managing and planning the urban ecotourism concept for Kota Kinabalu city. It clearly shows opportunities and priorities to be taken based on destination advantages, i.e. resource allocation tool to lessen the gap between importance and performance to ensure sustainably of the industry for Kota Kinabalu city. This is supported by a previous study that IPA has been shown to provide service managers with information regarding satisfaction measurement and prioritizing of resources (Wade & Eagles, 2003).

Conclusion

Importance-performance analysis (IPA) is an easy and important tool that helps managers and planners alike to manage the tourism destination in Kota Kinabalu as it simultaneously assesses motivation and satisfaction of respondents. This tool managed to identify that tourists to this city perceived that Kota Kinabalu

has the potential as an urban ecotourism destination, as it has unique nature that is currently the main tourist attraction and at the same time satisfies the expectation of tourists. This study concludes that the features of unspoiled and unique natural environment, destination quality, chance of interaction with local community, participation of local people in ecotourism activities, destination access, recreational activities, and diversity of culture and history are the strengths of tourism products in Kota Kinabalu city. These features should be focused on to better strategize and market Kota Kinabalu as an urban ecotourism destination. Managers could also better strategize focus areas, according to importance in order to gain maximum economic benefit, based on their existing manageable resources. In conclusion, this study managed to grasp a better understanding of the current market demand through a concurrent motivation and satisfaction study of tourists, using IPA as a measurement tool. Tourists were satisfied with their travel to Kota Kinabalu especially with the attraction that the city offers followed by the environmental settings of tourism destinations. The study also shows a high percentage (97%) of respondents agreed that Kota Kinabalu city has the potential to be developed as an urban ecotourism destination. This study could be a benchmark for future further studies that could also be extended to other tourism and sustainability grounds.

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