THE APPLICATION OF MARKET APPEAL-ROBUSTICITY MATRIX AS A TOOL FOR CULTURAL HERITAGE AND TOURISM MANAGEMENT (CASE STUDY: MELAKA HISTORIC CITY)

ERA TRIANA

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Teristimewa untuk

"Kedua orang tua; Papi (Muchtar Aziz, B.A) dan Mami (Karnaisah)"

yang telah banyak memberikan motivasi dan semangat dalam setiap langkah. Do'a dan kasih sayang yang selalu hadir dalam hidup serta pengorbanan yang tak ternilai.

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ABSTRACT

Tourism carrying capacity refers to the concept of preserving and maintaining an area or asset in its original state, taking into consideration the ability and capability of resources to withstand the effects of tourist activities. The city of Melaka is cultural tourism destination heritage that has attracted local and foreign tourist. The city of Melaka is a destination that serves various roles and functions. The aim of this research is to evaluate the development of tourism in Melaka, and assess the impact of tourism activities on the tourism carrying capacity. This study will also determine the balance between the cultural heritage management and cultural tourism to plan a tourism management technique. The Market Appeal – Robusticity Matrix Method was used as a method based on the indicators that have been identified which can contribute to the development of tourism cultural heritage. The indicators consist of aspects, such as fragility or robustness of asset, product promotion, activity, aesthetic value, history, facilities availability and accessibility. It also involves education and tourism management system from the government and NGOs. The result of this study identified the cultural tourism asset that has a great potential for development based on the carrying capacity according to certain levels (A1, A2, C1, C2 and D1). Recommendations are given including the tourism management technique, the management carrying capacity, tourism promotion, policies, guidelines and strategies.

ABSTRAK

Keupayaan tampungan pelancongan merupakan suatu konsep memelihara dan menjaga sesuatu kawasan atau aset daripada berubah keadaan asalnya dengan mengambilkira kemampuan dan ketahanan sumberjaya terhadap kesan aktiviti pelancong. Bandar Melaka merupakan pusat pelancongan budaya dan warisan yang menjadi tumpuan pelancong antarabangsa dan pelancong domestik. Bandar Melaka juga merupakan destinasi yang mempunyai pelbagai fungsi dan peranan tersendiri. Justeru itu, kajian ini akan menilai tahap pembangunan pelancongan di Bandar Melaka dari segi keupayaan tampungan tanpa menjejaskan sumberjaya warisan budaya. Selain itu, kajian ini bertujuan untuk mengukur kesan aktiviti pelancongan terhadap keupayaan tampungan pelancongan dan menentukan keseimbangan antara pengurusan warisan budaya dan pelancongan budaya bagi merancang teknik pengurusan pelancong serta menilai kesan daripada aktiviti pelancong terhadap sumberjaya kebudayaan. Kaedah market appeal-robusticity matrix digunakan dalam merancang pengurusan pelancongan berdasarkan indikator-indikator yang telah dipilih sebagai faktor yang mempengaruhi perkembangan sumberjaya pelancongan warisan budaya. Indikator ini adalah melibatkan aspek-aspek berikut : kerapuhan atau kekuatan aset, pemasaran produk, persembahan aktiviti, nilai keindahan aset, sejarah, kemudahan dan akses. Ia turut mengambilkira aspek pendidikan dan sistem pengurusan pelancong daripada pihak-pihak kerajaan, badan bukan kerajaan dan pihak swasta. Hasil akhir kajian adalah penentuan aset pelancongan budaya yang berpotensi dibangunkan berdasarkan keupayaan tampungan mengikut tingkat-tingkat tertentu (A1, A2, C1, C2 dan D1). Seterusnya cadangan merangkumi teknik pengurusan pelancongan, pengurusan keupayaan tampungan, cadangan pemasaran pelancongan, polisi, garispanduan dan strategi berdasarkan penemuan kajian.

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CHAPTER 1

INTRODUCTION

This research focuses on the relationship between cultural tourism, cultural heritage management and tourism carrying capacity. The location of study area is Historical City of Melaka that has many cultural tourism values. This research will also discuss the impact and influence caused by the increasing number of visitors on cultural heritage management.

1.1 Background

Currently, cultural tourism is a trend which grows along with heritage tourism. Cultural tourism is focused on improving the historical attraction. Cultural tourism is one of the primary economic assets. Cultural tourism will be used as tourism attraction to increase the number of visitors. Cultural tourism uses the cultural or heritage assets to destination tourism. Besides, cultural heritage is a potential asset to improve tourism development. Cultural heritage has to be preserved and protected because it has the potential to attract tourists and promote the country's tourist destinations.

Therefore, the tourism asset needs policies or guidelines to integrate cultural tourism and cultural heritage management, by preservation and conservation. Furthermore, it requires policies and guideline to improve the tourism development. Besides that, policies are needed to conduct conservation, preservation or renovation of the cultural heritage asset in order to maintain its historical and aesthetic values.

In order to attract more visitors to a particular destination, the destination concerned should consider the following; good access, interesting and attractive attraction, modern facilities and wide ranging amenities. On the other hand, the negative impact will usually surface when the number of visitor exceeds the threshold limit combined with poor management. These negative impacts will create a serious effect on the heritage tourism assets. Therefore, there is a need to formulate a policy to minimize the negative impact caused by visitors.

Tourism is the second most important sector after the industrial sector in the development of Melaka. History and the uniqueness of Melaka with such a rich cultural heritage is the tourism asset of Melaka.

This case study impacts the growth of tourism development, which total to about 2,500,000 people/year in the year 2001, an increase of about 15.21% from year 2000 to 2001 (*Unit Promosi Pelancongan Negeri Melaka 2001*). With the increase in the number of visitors from year to year, the tourism carrying capacity is affected and we need to know whether the cultural tourism of Melaka is capable of accepting the increasing number of tourists.

1.2 Identifying Issues

The tourism development of Melaka has been actively fulfilling Melaka's target in improving ten primary tourism sectors, namely heritage/historical tourism, cultural, agro-tourism, health, sport, shopping, convention, recreation, education and food tourism (Unit Perancangan Ekonomi Negeri Melaka, 2003).

Melaka is well-known for its cultural tourism. Melaka has domestic and international visitors coming to its unique and attractive cultural tourism assets. Therefore, it is important to manage the tourism product (assets) property.

The study area will contain several issues and problems, as follows:

- a. The impact of growth of tourism development, especially cultural tourism, is the main issue in the cultural heritage management. An increasing number of visitors occur on weekends or holidays causing overcrowdedness and overuse of facilities.
- b. The pedestrian and vehicular conflict caused by visitors in the study area impacts on safety.
- c. The relationship between historical places and tourism is dynamic and may involve conflicting values, such as place of heritage has significance and intrinsic values for all people as an important basis for cultural diversity and social development. It should be managed in a sustainable way for present and future generations.
- d. The cultural heritage becomes important to the tourism urbanization. However Melaka does not have systematic management for visitors exceeding the number of visitors.

e. Currently, the growth of cultural tourism has been applied as a tool to convey the tourism development to tourism urbanization. Therefore, a guideline is required to manage the cultural heritage in order to create a balanced mechanism between the cultural heritage management and cultural tourism.

1.3 Research Problem

To what extent can the tourism carrying capacity be used to determine the level of tourism development without degrading the fragile cultural resources in the Historical City of Melaka?

1.4 Aim and Objectives

The aim and objectives of this study are as follows:

1.4.1 Aim

The aim of this study is to determine the level of tourism development without degrading the fragile cultural resources in the Historical City of Melaka.

1.4.2 Objectives

In order to fulfill the aim of the study, there are several objectives that will be accomplished in this study. The objectives of this research are as follows:

- a. To determine the appropriate balance between cultural heritage management and cultural tourism.
- b. To recommend visitor management techniques to minimize the impact of tourism on the fragile cultural resources.

1.5 Research Questions

This study of the Historic City of Melaka aims to seek answer to the following research questions:

- 1. What is the form of cultural tourism to be carried out in the study area?
- 2. What is the impact of tourism on cultural heritage management?
- 3. How do we apply cultural tourism and heritage management in tourism carrying capacity?
- 4. How do we evaluate the tourism carrying capacity of tourism development that exceeds degrading which is caused by fragile cultural resources?
- 5. What customs could be affected by increasing the number of visitors and interactions between visitors and local residents?
- 6. How do we establish recommendations of guidelines in tourism carrying capacity?

1.6 Scope of Study

The scope of study includes cultural heritage, impact of tourism carrying capacity from the various tourism activities, as follow;

A. Cultural Heritage

Cultural Heritage is an exhibition of subsistence and culture of the past to the present that has value and history. Currently, cultural heritage is one of the tourism trends into tourism development. Cultural heritage is an asset that must be preserved and conserved from the negative impact of tourism because it has an interesting. Cultural heritage includes tangible assets and intangible asset (ICOMOS, 1999). These assets are identified and conserved for intrinsic values or significance to a community rather than for extrinsic values as tourism attraction (du Cross, 2002:7). Therefore, this study makes guidelines to efforts of preservation of asset from fragile cultural assets.

B. Tourism Carrying Capacity

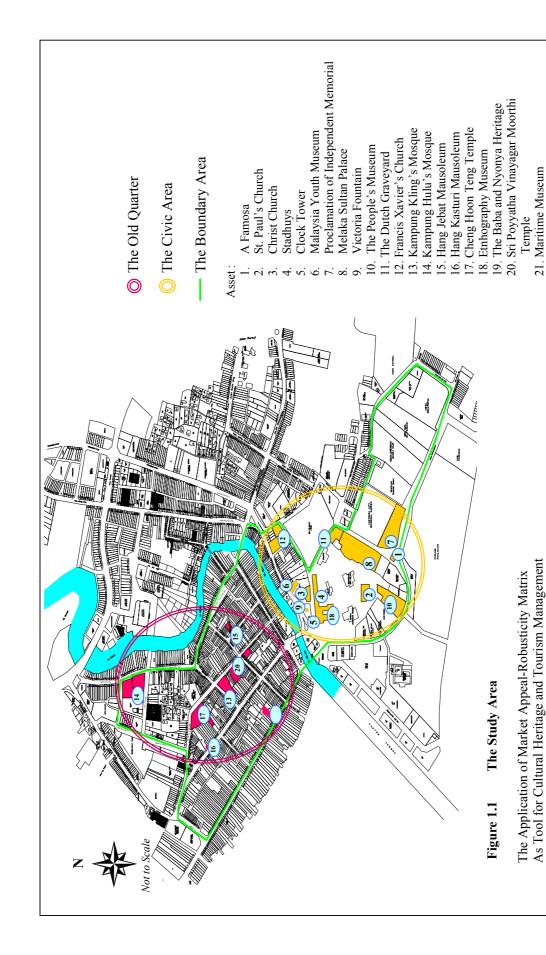
Tourism carrying capacity is the capacity of an area to cope with visitors and development without being detrimental to resources or a decrease in visitor satisfaction (Lim Li Ching,1995). In this study, the type of tourism correlates with cultural heritage management. Therefore, the asset needs guidelines to integrate cultural tourism and cultural heritage management with its application into tourism carrying capacity, to support the increasing number of visitors.

1.7 The Study Area

Melaka is a city center, which still has historical and various cultural tourism values. Therefore, Melaka city is called historic city. The old cultural heritage assets are still conserved until now.

Since there are cultural tourism and cultural heritage, many visitors come to Melaka for vacation and weekend/holiday by visiting assets of cultural value and especially, cultural heritage assets in Melaka city center. Therefore, this study chooses Melaka city center as the study area, because Melaka has a good historical cultural heritage value.

The cultural heritage of Melaka is an attraction for visitors who wish to see the historical value. The number of visitors to Melaka increases every year. It can be shown that the increasing number of visitors is around 15.21% (*Unit Promosi Pelancongan Negeri Melaka, 2001*). As such, Melaka will be experiencing growth influencing the impact of an increasing number of tourists. To minimize the negative impact, this study chooses Melaka as the study area in order to determine the carrying capacity of cultural resources in the Historic City of Melaka and to assess the potential of urban tourism development in Melaka, which includes St. Paul's Church, A Famosa and Stadhuys area, also called the civic area and residential area of Jalan Tan Cheng Lock – Jalan Hang Jebat – Jalan Tukang Emas – Jalan Tukang Besi – Jalan Tokong or old quarter. (*See plan 1.1*).



1.8 Research Design

The research design started from preliminary to presenting recommendations. With reference to figure 1.1, the research design can be explained from preliminary stage until presentation of recommendations. Firstly, tourism urbanization has three aspect includes economic role, social and physical change. These are followed by four aspects which include gentrification, displacement, marginalization and Leisure City. Then, these four aspects could influence the cultural heritage management. The Tourism Carrying Capacity is then used as an instrument for analysis, using Market Appeal-Robusticity Matrix Method. Finally, this analysis can help to produce recommendations for management of tourism planning.

Research Design can be summarized in the following figure:

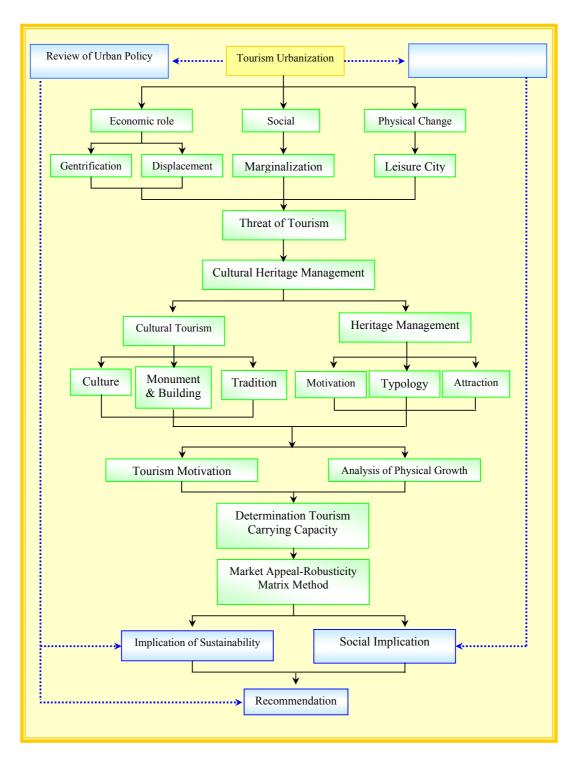


Figure 1.1 Research Design

1.9 Research Framework

This study will be divided into four stages. The first stage includes issues, problems, aim, and expected results. The second stage is to study the appropriate literatures from books, journals or source of relevant. The third stage is to collect data and analysis to perform analysis using reliable data and appropriate method. The final stage is to implement the results into a guideline for tourism management.

1.9.1 Study Identification

In this stage, information regarding study areas and identification of related issues will be studied. The study will be focused on identification and determination of issues and problems that link with tourism carrying capacity in Melaka especially from visitors experience, civilization, and socio-culture, such as economic role, and related social, and physical change. In this stage, issue and problems will be discussed and analyzed to obtain a better picture concerning parameters or indicators that will be used in this study.

1.9.2 Literature

This study consists of relevant literature about tourism carrying capacity and choice indicators of linkage with cultural heritage management. Besides that, it is to identify cultural resources and social conditions based on technique and perception. Therefore, this case will be easily analyzed based on its indicators.

The literature will detail the theoretical aspects of the study. The literature is divided into five parts namely cultural tourism, heritage tourism, urban tourism, cultural heritage management and tourism carrying capacity. It also includes the general cultural heritage management and threat of tourism.

1.9.3 Data Collection and Analysis

In order to accomplish the study, data are collected from relevant literature and field survey. In this study, there are three methods of data collection which are as follows:

1.9.3.1 Primary Data

This research is using Market Appeal – Robusticity Matrix Method. The method is conducted by observation and interview way. During conduct observation and interview, researcher is helped by master student have been training about field survey, there are five person. The research has been conducted for three months with classification in two groups are weekdays and weekend/holidays. Researchers are placed on each asset during 2 - 8 hours/days, and controlled by coordinator of researcher in every hour.

A. Observation

Observation is conducted in a systematic and selective way by watching and listening to the interaction or phenomenon at the location of study. In many situations, observation is the most appropriate method for data collection. There are two types of observation, i.e. participant and non-participant observation (Veal, 1992).

Participant observation means that the researcher participates as a visitor in every tourism asset to collect all information including assessment of structural ownership, management history, cultural significance, available resources for interpreting the information, its level of access to the public, the existence of tourism products or nearby attractions, and identification and evaluation of stakeholders who are likely to be involved in tourism, heritage conservation, and planning (Veal,1992). This type of observation is performed on tourism assets that have cultural heritage assets such as the museum, Baba Nyonya Heritage, and the palace of the Melaka Sultanate.

Participant observation is conducted by researcher to feel and understanding of satisfaction level on every asset besides to communication about something of relevant with assets, without using question list.

Non-participant observation is the type of observation in which the researcher does not get involved in the activities but remains as a passive observer (Veal, 1992). The researcher only watches and listens to the activities and draws the conclusion from this observation. This observation is accomplished to measure the number of visitors on culture tourism assets without a certain visiting time to enter those places. This non participant observation is conducted by two ways i.e. first, the asset without ticket system, such as religious places and open space asset such as Victoria Fountain. The researcher looks at the location of study from the other place and calculates every incoming visitor to asset (Appendix A). The number of visitor is calculated manually. The rate of calculation covered about 2 – 8 hours/day/assets. The objective of this observation is to know the tourism carrying capacity from every asset. After knowing the number of incoming visitors, then the number is divided by the total time to obtain the number of visitors every day per asset as presented in the following formula:

Total number of visitors =
$$\frac{\text{Calculate timing}}{\text{Visit timing per day}}$$

Second, can be question to manager, how many incoming of visitor based on totally ticket that sold during office hour. Besides, can information from secondary data.

B. Interview

The interaction between two or more individuals with a specific purpose is called an interview. In this study, the interviews are conducted for gathering data. Interview is a commonly used method to collect information from people. Interviews can be classified according to the degree of flexibility as unstructured and structured (Diamantopoulos, 1997). In this study, the researcher conducted the interview using the semi-structured category. Interview is conducted semi structure

way, where researchers giving some questions to visitor, based on question list have been arranged (Appendix B). The researcher as an interviewer asked several questions to the visitors and the people involved in cultural heritage management, such as building owners, building security personnel, associate heritage, conservationists and related government officers. There are 150 respondents were interviewed, including visitors, host community, building owners, building security personnel, associate heritage, conservationists and related government officers. Unstructured interviews can be carried out in a one-to-one situation or collectively as a group such as questions regarding cultural heritage management. The interview is conducted to know the level of satisfaction of visitors toward cultural heritage management on every asset. (Ryan, 1995)

After all interview and observation was conducted, and all data is complete, scores were made on every sub indicator that have been collected based on characteristics and criteria of asset. All data primer (interview and observation) and secondary is classified suitable score. The scores for tourism and cultural heritage management sub sets are assigned separately. The score can be assigned by using a scaled point system. The score ranges from one for low rating to five for high rating. Once grades have been to all indicators in each subset, the asset can be plotted on the matrix to determine its status. Finally, the result of score can to conduct analysis by using Market Appeal – Robusticity Matrix Method to get grade / level each asset. Where its grade have been classified (A, B, C, D) based on assessment on Market Appeal-Robusticity Matrix Method.

There are many factors that must be considered when assessing how to integrate tourism with cultural heritage management. Although all factors must be taken into consideration, the list is too long to be easily translated into a practical audit tool that can be used to assess individual assets and locate them in the Market Appeal-Robusticity Matrix. The simplified audit procedure discussed below focuses on the most significant elements that must be evaluated.

1.9.3.2 Secondary Data

Secondary data can be defined as information that has already been assembled or collected for some other purposes but appropriate to be used in this study. They are obtained from:

- a. Library in the form of books (published by government departments, research foundation)
- Annual reports (published by business firms as well as non profit organizations, such as PERZIM)
- c. Abstract and index service (covering thousands of periodicals, academic reports and journals, such as Journal of Sustainable Tourism, Leisure Science and reports from Tourism Malaysia, paper published nationally and internationally)
- d. Data from several relevant books published by the government (e.g. record of the number of incoming visitor per day, per month, and year i.e. Promosi Pelancongan Negeri Melaka 2002, Rancangan Struktur Negeri Melaka 2002, Unit Perancangan Ekonomi Negeri Melaka 2003 and Japan International Cooperation Agency-JICA, Map from MPMBB, Tourism Planning Research Group-TPRG UTM).

Analysis will be carried out after understanding all indicators, which are related to tourism carrying capacity, and based on reliable data collection. Analysis will be performed using Market Appeal-Robusticity Matrix Method. The methodology conducted includes doing strategy research and specifying standards for indicator, and then monitoring conditions for tourism activities in the study area. The evaluation of the results will be focused on recommendations of guidelines for tourism management. The Market Appeal-Robusticity Matrix Method will be used to get information about cultural tourism development and application between Market Appeal and Robusticity or Tourism and Culture Heritage Management.

1.9.4 Recommendation

This stage is a result of analyzing the cultural tourism of Melaka as a historic city and the satisfaction of visitors as respondents. The result of the study will form a plan, which is relevant with the determined aim and purpose. The recommendation and implication which have been done on the tourism carrying capacity is to see their impact on functioning of city core and tourism destination planning. Finally, it could implement a plan and management related with tourism carrying capacity. It can be used as a guideline in tourism development.

1.10 Technique

This research implemented the Robusticity Matrix Method as the technique in evaluating data. This study will discuss the cultural tourism and cultural heritage management, combining both to know the capability of cultural tourism in tourism carrying capacity.

The Robusticity Matrix Method is used to evaluate the cultural tourism potential. It will provide macro indicators about how assets could be managed and insighted in order to optimize the relationship between tourism and cultural heritage management (du Cross 2000; du Cross 2001). Therefore, the methodology of Market Appeal-Robusticity, is applied in different location and characteristic in order to form various culture heritage.

Robusticity determines the tourism potential involved and the assessment is not only for market appeal but it includes also the assets ability to cope with tourists. Although market appeal is clearly an important consideration in a tourism perspective, isolating it can be considered a sure recipe for future problems. To make tourism work and to achieve true sustainability, market appeal must also be correlated to the ability of the asset to cope with increasing visitation or to be modified for use in a manner that does not compromise its value.

The audit procedure of Market Appeal – Robusticity Matrix of Tourism Potential will help asset managers and regional tourism planners to identify which assets are best suited for cultural tourism development, the assets where tourism is not recommended, and assets in which tourism may be an option but will need to be managed carefully.

1.10.1 Sampling Method

This part explains the method to select sample for analysis. The sample is taken based on area that related on cultural heritage and cultural tourism. In this study, the sample known as tourism asset has an attraction for tourists.

A. Sample Selection

Only the assets having cultural tourism value are chosen in this research, such as the cultural value, historical value, aesthetic value (including architectural value), ambience and setting, tourism activity, need of special treatment (e.g., pilgrimages, festival, sport), fragility of the assets, etc.

The number of samples or tourism assets analyzed, consisting of conservation and heritage area, amount to 21 assets (table 1.1). The assets are chosen based on their cultural background and historical aspects since the British, Portuguese, and Dutch colonization.

Table 1.1: Sample Selection

Type of Sample	Assets / Sample	
	1. Stadhuys	
	2. A Famosa	
Historical monuments	3. St. Paul's Church	
	4. Victoria Fountain	
	5. Clock Tower	
	1. The Baba and Nyonya Heritage Museum	
	2. Malaysia Youth Museum	
	3. The People's Museum	
Museums	4. Melaka Sultan Palace	
	5. Proclamation of Independence Memorial	
	6. Maritime Museum	
	7. Ethnography Museum	
	1. St. Francis Xavier's Church	
	2. Christ Church	
Poligious Places	3. Sri Poyyatha Vinayagar Temple	
Religious Places	4. Kampung Hulu's Mosque	
	5. Kampung Kling's Mosque	
	6. Cheng Hoon Teng Temple	
	Hang Jebat Mausoleum	
Graveyard	2. Hang Kasturi Mausoleum	
	3. The Dutch Graveyard	

B. Sample Size

Sample size is a measurement to take samples which will be analyzed from a number of samples in study area. Sample size taken is 21 samples, based on sample selection, which have been explained in section A.

1.10.2 Method of Analysis

This study analyzes the tourism potential by using the Market-Appeal Robusticity Matrix. All data are classified into sub-indicators. The simplified audit procedure is applied to evaluate the most significant elements. The elements are listed in table 1.2.

Each asset is graded according to these variables. The scores for tourism and cultural heritage management subsets are assigned separately. The score can be assigned by using a scaled point system. The score ranges from one for low rating to five for high rating. An asset that is truly unique, robust and has an interesting story that is relevant to the visitor would receive a higher score. In addition, some variables those that are more critical for the evaluation process may receive a higher, including icon status, fragility and others.

Once grades have been assigned to all indicators in each subset, the asset can be plotted on the matrix to determine its status.

Before total assignment can be plotted on the matrix, tourism social carrying capacity and Market – Appeal Robusticity Method should be first compared. The asset can be assigned as moderate score even though assignment of each indicator is high. However, incoming visitors are few, so the asset needs to provide interesting attraction and activity to attract visitors. If incoming visitor is high, but the asset cannot cope with the visitors because the asset is fragile, then the asset is categorized as low.

 Table 1.2:
 Cultural Heritage Tourism Sub indicators

	Tourism		Cultural Heritage Management
Market Appeal :		Си	ltural Significance :
1.	Ambience and setting	2.	Aesthetic value (including architectural
2.	Well-known outside local area		value)
3.	National icon or symbol	3.	Historical value
4.	Can tell a "good story" – evocative place	4.	Educational value
5.	Has some aspect to distinguish it from	5.	Social value
	nearby attractions	6.	Scientific value
6.	Appeals to special needs or uses (e.g.,	7.	Rare or common (locally, regionally,
	pilgrimages, festival, sports)		nationally)
7.	Complements other tourism products in	8.	Representativeness (locally, regionally,
	area/region/destination		nationally)
8.	Tourism activity in the region		
9.	Destination associated with culture or	Rol	busticity:
	heritage	1.	Fragility of the asset
10.	Political Support	2.	State of repair
		3.	Management plan or policy in place
Pro	oduct Design Needs :	4.	Regular monitoring and maintenance
2.	Access to asset's features	5.	Potential for ongoing involvement and
3.	Good transport/access to asset from		consultation of key stakeholders
	population centers	6.	Potential for negative impacts of high
4.	Proximity to other heritage attractions		visitation on
5.	Amenity (toilets, parking, pathways,		- fabric of the asset(s)
	refreshments, availability of information)		 lifestyle and cultural traditions of local community(ies)
		7.	Potential for modifications (as part of
			product development) to have negative
			impact on
			- fabric of the asset(s)
			- lifestyle and cultural traditions of local
			community(ies)
		8. I	Frequency of Visitor

Source: Mckercher and du Cross, 2002

The relationship between these two dimensions can be seen in the Market Appeal-Robusticity (Figure 1.2). Different actions are proposed depending on where the asset is located in the matrix.

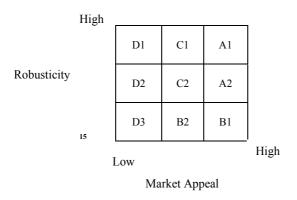


Figure 1.2 Market Appeal-Robusticity Matrix of Tourism Potential

"A" Grade assets are heritage places with moderate to high market appeal and high (A1) to moderate (A2) robusticity. They are ideally suitable for significant tourism activity because they have features to attract tourists and can withstand the use in a significant level. Only minimum moderate conservation measures are required to protect the cultural values from the impact of heavy visitation.

"B" grade assets have high (B1) to moderate (B2) market appeal but are low in robusticity. Low robusticity may mean that the physical fabric of the assets is fragile or that its cultural value is extremely sensitive to significant impact from incoming visitors. Tourists may show strong interest to visiting these places but, because of their fragility, they have limited ability to cope with intense use.

"C" grade assets have moderate tourism appeal and have high (C1) to moderate (C2) robusticity. Based on the tourism perspective, there are two management options that can be applied to these assets. Because these assets are robust, they may be able to withstand greater visitation levels than their current market appeal would suggest. A management approach to develop the potential assets optimally or to enhance the experience to expand its market appeal may be adopted. Alternatively, management policy may strive to maintain the status quo, with the consequence that the amount of incoming visitors will be limited.

"D" grade assets have low market appeal and unlikely to attract significant incoming visitor, unless the assets are modified to such an extent that its intrinsic values would be almost totally sacrificed. These types of asset should be managed for some reasons other than tourism. The biggest challenge may be to convince asset managers about their limited appeal.

1.11 Expected Result

The expected result of the study is that the findings could overcome the threshold of the number visitors coming to Melaka Historic City, and could have an impact on tourism carrying capacity of cultural tourism.

It can be used to determine the level of tourism development in the Melaka Historic City without degrading the fragile cultural resources. The study is prepared to recommend guidelines and regulations related to tourism urbanization.

1.12 Conclusion

This study is based on an observation using Market Appeal-Robusticity Matrix Method to know the character of indicators and to measure the capability of assets in providing an attraction. Besides that, the study also focuses on supply aspects which provide a cultural heritage management in order to perform a policy.

The result of this study can be used by clients to determine weak and strong assets in recommending guidelines for conservation and preservation. This effort can directly improve attraction of the area and optimize satisfaction of visitors and thereby improve the number of visitors and enhance repeat visits.

By identifying assets which cannot cope with overcrowdedness of visitors, it can minimize the negative impact caused by visitors. Thus, this chapter could be a platform for the researcher to do the research in more detail in solving the problem in the case study.

REFERENCES

- Adam, D. (1998). The World of Cultural Policy. In: UNESCO's World Conference on Cultural Policies for Development. March/April 1998. USA. Copyright Adam & Goldbard.
- Anonymous. (1993). The Nomination of Cultural and Natural Heritage of Malaysia to the World Heritage List. Cititel. Pulau Penang. Malaysia.
- Anonymous. (2000). Sustainable Tourism and Culture Heritage. In: A Review of Development Assistance and its Potential to Promote Sustainability. UNESCO. Nordic World Heritage Office.
- Amran Hamzah. (2001). *The Concept of Urban Tourism*, paper presented at the workshop on the role of Government Agencies on Urban Tourism, Sabah.
- Amran Hamzah. (2002). Cultural Heritage Management and Tourism in Melaka:

 The Need for a Systematic Approach, paper presented at seminar Kebangsaan
 Perancangan Bandar dan Wilayah ke 20, UTM, Johor.
- Ashworth, G.J and Tunbridge, J.E. (1990). *The Tourist Historic City*. Biddles Ltd, Guildford and Kings Lynn, Belhaven Press. London and New York.
- Becker, R.H., Jubenville, A and Burnet, G.W. (1984). Fact and Judgment in the Search for a Social Carrying Capacity. Leisure Sciences. 6(4): 475-485. Russak & Company, Inc.
- Breheny, M. (1995). *Environment Capacity: A Methodology for historic city*. ARUP BDP in Association. London.

- Burns, P.M and Holden, A. (1995). *Tourism A New Perspective*. Prentice Hall. London.
- Chu, G.C. (1985). Preservation of Traditional Culture: A Challenge to Modernization. In: Foote, P.B., Graburn., Hibbarn., Minerbi and Tiwari, S. ed. Problem and Issues in Cultural Heritage Conservation, Hawai Heritage Center. Hawai
- Diamantopoulos, A and Schlegelmilch, B.B. (1997). *Taking the Fear Out of Old Data Analysis*. The Dryden Press. London.
- du Cros, H. and McKercher, B (2002). *Cultural Tourism: The Partnership Between Tourism and Cultural Heritage Management.* The Haworth Hospitality Press, Inc. American.
- Eder, K. (1996). The Social Construction of Nature. SAGE Publication. London.
- Farrell, T.A and Marion, J.L. (2002). The Protected Area Visitor Impact Management (PAVIM) framework: A Simplified Process for Making Decisions. *Journal of Sustainable Tourism*. 6(10): 31-47
- Glasson. J. et al. (1995). Toward Visitor Impact Management: Visitor Impacts,

 Carrying Capacity and Management Responses in Europe's Historic Town

 and Cities. Printed in Great Britain by Antony Rowe Ltd. Chippenham,

 Wiltshire.
- Hall, C.M and Lew, A.A. (1998). Sustainable Tourism; A Geographical Perspective. Longman. United Kingdom.
- Hall, C.M and McArthur. (1996). The Human Dimension of Heritage Management:

 Different Values, Different Interest, Different Issue. Oxford University Press
 Australia.

- Hashimoto, A. (2002). *Tourism and Sociocultural Development Issues* in eds *Tourism and Development, Concept and Issues*. Channel View Publication. Sidney.
- Henry, I.P and Jackson, G.A.M. (1996). Sustainability of Management Processes and Tourism Product and Contexts. *Journal of Sustainable Tourism*. 4(1). Australia.
- House, P.W and William, E.R. (1937). *The Carrying Capacity of Nation*. Lexington Books. American.
- Jansen-Verbeke, M. (1997). Urban Tourism: Managing Resources and Visitors Meaning. In: Salah Wahab and John J.P. ed. *Tourism, Development and Growth*. Routledge. London.
- Kadir H. Din. (1997). Tourism and Cultural Development in Malaysia: Issues for a New Agenda. In: Sinji, Y., Kadir H. Din and Eades. J.S. ed. *Tourism and Cultural Development in Asia and Oceania*. Universiti Kebangsaan Malaysia. Bangi. Malaysia.
- Keelan, N. (1996). *Maori Heritage: Visitor Management and Interpretation*. Oxford University Press Australia.
- Law. M. C. (2002). *Urban Tourism: The Visitor Economy and The Growth of Large Cities*. Second edition Continuum. London.
- Lim Li Ching. (1995). The Concept and Analysis of Carrying Capacity: A Management Tool for Effective Planning. Report Under Project WWF. Malaysia.
- Lim Li Ching. (1997). Carrying Capacity Assessment of Pulau Payar Marine Park.

 Report Under Project WWF (Tabung Alam Malaysia). Petaling Jaya.

 Malaysia

- McArthur, S. (2000). Beyond Carrying Capacity: Introducing a Model to Monitor and Manage Visitor Activity in Forest. In: X. Font and J. Tribe. ed: *Forest Tourism and Recreation*. CABI Publishing. Wallingford.
- Mowforth, M and Munt, I. (1998). *Tourism and Sustainability*. Routledge. London and New York.
- Mohd. Zainal Hamid *et. al.* (1995). Aspek Pelancongan Bandar melalui Pendekatan Carrying Capacity. In: Tahun 5 SPBW Jabatan Perancangan Bandar dan Wilayah. ed: *Kearah Perancangan Bandar Yang Lebih Baik*. Prosiding 1996 Seminar Kebangsaan Perancangan Bandar. 11-12 September. Universiti Teknologi Malaysia. 156-186.
- Newsome, D., Moore, S and Dowling, R.K. (2002). *Aspect of Tourism; Natural Area Tourism: Ecology, Impact and Management.* Channel View Publication. Sidney.
- Nielsen, J.M., Shelby, B and Haas, J.E. (1997). Sociological Carrying Capacity and The Last Settler Syndrome Pacific Sociological Review. Pacific Sociological Assn. 20(4):568-581.
- Nurzeti binti Abdul Rahman. (2002). Mengenal Pasti Tipologi Pengunjung/Pelancong Domestik bagi Sebuah Destinasi Pelancongan Bandar, Kajian Kes: Bandar Melaka. Thesis Master Universiti Teknologi Malaysia.
- Page, S. (1995). Urban Tourism, Routledge. London and New York.
- Page, S.J and Hall, C.M. (2003). Managing Urban Tourism. Prentice Hall. Cina
- Perancangan Bandar dan Wilayah Fakulti Alam Bina UTM. (1994). *Kajian Keupayaan Tampungan dan Pelan Pengurusan Pelancongan/rekreasi Pulau Perhentian Terengganu*. Cadangan Pelan Pengurusan Pelancongan. Johor.

- Picard, M. (1995). Cultural Heritage and Tourist Capital: Cultural Tourism in Bali. In: Lanfant, M., Allock, J.B and Bruner, E.M. ed. *International Tourism*. SAGE Publication Ltd. London.
- Raja Norashekin binti Raja Othman. (2003). *Kajian Penilaian Keberkesanan Trail Warisan Sebagai Alat Pengurusan Pelancong, Kajian Kes : Bandar Melaka*.

 Thesis Master Universiti Teknologi Malaysia.
- Ryan, C. (1995). Researching Tourist Satisfaction: Issues, Concepts and Problems. London. Routledge.
- Saveriades, B. (2000). Establishing the Social Tourism Carrying Capacity the Tourist Resorts of The East Coast of The Republic of Cyprus. In: *Tourism Management*. 21(2000): 147-156.
- Schreyer, R. (1984). Social Dimension of Carrying Capacity: An Overview. In: *Leisure Sciences*. 6(4):387-393. Russak & Company,Inc.
- Shackley, M. (1997). Saving Cultural Information: The Potential Role of Digital Database in Developing Cultural Tourism. *In: Journal of Sustainable Tourism.* 5(3). Australia.
- Sharpley, R. (2002). *Tourism: A Vehicle for Development? In eds Tourism and Development, Concepts and issues.* Channel View Publications. Sidney.
- Shelby, B, *et al.* (1984). Expectation, Preferences, And Feeling Crowded In Recreation Activities. In: *Leisure Sciences*. 6(1):1-13. Russak & Company, Inc.
- Shelby, B and Heberlein, T.A. (1984). A Conceptual Framework for carrying capacity Determination. In: *Leisure Sciences*. 6(4):433-451. Russak & Company, Inc.

- Sinji, Y, et al. (1997). Tourism and Cultural Development in Asia and Oceania. Universiti Kebangsaan Malaysia. Bangi. Malaysia
- Smith, S.L.J. (1995). *Tourism Analysis, a handbook*. Second edition. Longman Group Limited. England.
- Sofield, T. (2002). Carrying Capacity and Management in Protected Areas. WWF Conference Athen.
- Stankey, G.H and McCool, S.F. (1984). Carrying Capacity in Recreational Setting: Evaluation, Appraisal, and Application. In: *Leisure Sciences*. *6*(4):453-473. Russak & Company, Inc
- Swarbrooke, J. (2002). Sustainable Tourism Management. CABI Publishing. London.
- Swarbrooke, J. (2002). The Development and Management of Visitor Attraction. Butteworth Heinewann.
- Syed Zainal Abidin Idid. (2000). *Pemeliharaan Warisan Rupa Bandar*. Badan Warisan Malaysia. Malaysia.
- Tarrant, M.A. and English, D.B.K. (1996). A Crowding Based Model of Social Carrying Capacity Application for Whitewater Boating Use. In: *Journal of Leisure Research*. 28(3): 155-168.
- Theobald, W.F. (1994). The Context, Meaning, and Scope of Tourism. In: Theobald, W.F. ed. *Global Tourism*. Butterworth Heinemann.
- Timothy, J.D and Boyd. W.S. (2003). Heritage Tourism. Prentice Hall. China.
- Unit Pengurusan Alam Sekitar 4 SPBW Fakulti Alam Bina. (1991). *Pemakaian Teknik Keupayaan Tampungan (Carrying Capacity) dalam Penilaian Sumberjaya Pelancongan dan Rekreasi, kajian kes: Pulau Besar, Mersing*. Laporan Analisis. UTM. Johor.

- U.S, Army. (1979). *Recreational Carrying Capacity Study*. Corp of Engineers Information Exchange Bulletin. R(79): 1.
- Veal, A.J. (1992). Research Methods for Leisure and Tourism: A Practical Guide: Essex. UK. Longman Group.
- Weaver, D and Opperman, M. (2000). *Tourism Management*. John Wiley & Sons. Autralia ltd.
- Weiler, B and Ham, S.H. (2002). Tour Guide Training: A Model for Sustainable Capacity Building in Developing Countries. In: *Journal of Sustainable Tourism* 10(1): 52-69.
- William, P.W and Gill, A. (1994). Tourism Carrying Capacity Management issues. In: Theobald, W.F. ed. *Global Tourism*. Butterworth-Heinemann ltd. Oxford London.

Published Internet:

Rees, W.E. Revisiting Carrying Capacity: Area Based Indicators of Sustainable.

University of British. Columbia. (www.dieoff.org/page 110.html.)

What is Carrying Capacity (<u>www.gdrc.org/uem/footprints/carryingcapacity.html.</u>)