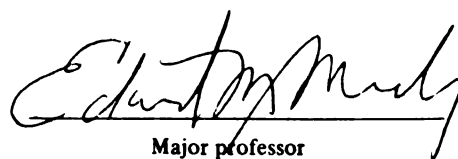This is to certify that the

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DOMESTIC TOURIST DESTINATION BASED ON THE IMPORTANCE AND
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AZLIZAM AZIZ

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of the requirements for

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AN EVALUATION OF THE ATTRACTIVENESS OF LANGKAWI ISLAND AS A
DOMESTIC TOURIST DESTINATION BASED ON THE IMPORTANCE AND
PERCEPTIONS OF DIFFERENT TYPES OF ATTRACTIONS

By

Azlizam Aziz

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ABSTRACT

AN EVALUATION OF ATTRACTIVENESS OF LANGKAWI ISLAND AS A DOMESTIC TOURIST DESTINATION BASED ON THE IMPORTANCE AND PERCEPTIONS OF DIFFERENT TYPES OF ATTRACTIONS

By

Azlizam Aziz

The purpose of this study was to assess the attractiveness of Langkawi Island, Malaysia, as a tourist destination for domestic visitors and to segment the visitor market by using visitors' perceptions of the availability of different types of attractions on the island and the importance placed on each attraction in the decision to visit the island. The study was also used to determine the influence of domestic visitors' previous experience on the assessment of the island's attractiveness and the relative importance of each attraction in influencing their decision to visit the island.

Destination attractiveness is an indication of the ability of destination in satisfying tourists' needs and expectations. A variation of multi-attribute model, as originally introduced by Rosenberg and Fishbein, was used in measuring attractiveness. The model suggests that a person's attitude is a function of *the strength of a held belief* and *a person evaluation of that belief*. Evaluations were made on eight types of attractions that are frequently associated with Langkawi Island: historical attractions, beaches, theme parks, shopping complexes, sport and special events, nature and outdoor recreation, agriculture-tourism attractions, and holiday resorts.

Questionnaires were distributed among domestic visitors traveling to Langkawi Island between August 8, 2001 and September 2, 2001. A total of 754 surveys were

completed which gathered data such as socio-demographics, trip characteristics, and travel behavior. In addition, visitors' ratings on belief/perception and importance scales were also recorded. This enabled the study to evaluate the overall attractiveness of Langkawi and to use the data for segmentation purposes. Data analysis involved the application of t-tests, chi-square, analysis of variance, and cluster analysis.

Findings indicated that the beach was the most important attraction type in visitors' decisions to visit Langkawi, followed by historical attractions, shopping complexes, and holiday resorts. These attraction types were also perceived as a strength of Langkawi's tourist offerings for the domestic market. Previous experience on the island was found to influence the attractiveness values for Langkawi and importance ratings for each type of attraction. The repeat visitors, in general, gave lower attractiveness values to the island. Similarly, they also indicated lower importance for most types of attractions compared to first-time visitors.

Attractiveness scores were further used to segment the findings of the domestic visitors. Three substantial segments were identified and labeled as: 'Historical Vacationer', 'Recreational Traveler', and 'General Experience.' Significant differences were found among the segments in terms of state of residency, length of trips, purpose of trips, intention to visit historical attractions, previous visit experiences, types of trips, and choice of accommodations. Alternative segmentation, by using multiplicative scores as segmentation base and removing 'business only' visitors from the analyses, produced four segments that subsequently labeled as 'Vacation Travelers', 'First-time Visitors', 'In-state', and 'Active Recreation' segments.

Dedicated to Ummi, Ain, Sarah, Wafa......

ACKNOWLEDGEMENTS

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CHAPTER 1

INTRODUCTION

An Overview of Tourism in Malaysia

As in other developing countries, Malaysia has incorporated tourism into its economic development strategy. The tourism industry has been strongly promoted in the country as a means of creating new employment opportunities, reducing the deficit in the balance of foreign earnings, and diversifying its economic base. The pivotal role of tourism in the Malaysian economy is evident. With contributions of more than RM9 billion to the nation's economy in 1998, tourism represents the third most important industry after the manufacturing sector and palm oil industry (Malaysian Government, 2000).

While the country, in general, is still recovering from the devastating effects of the economic downturn of 1997/98, the future of the Malaysian tourism industry remains strong. The Malaysian Eight National Plan (2001-2005) anticipates that tourism will continue to be one of the driving forces for national economic growth. The foreign tourist influx is projected to be 14 million people and will generate an earning of approximately RM29 billion for the year 2005. In the course of surviving the economic slowdown, the Malaysian government discovered that, although the recession offset foreign tourist growth projections, it became responsible for fostering the emergence of the once-overlooked domestic tourism market. A report released by the Malaysian Government (2000) indicated that in 1999 there was an increase of almost 90 percent in the amount of domestic travel over the previous year.

1

A brief historical perspective may offer several explanations for why the economic slowdown actually helped to rejuvenate the domestic tourism market. In Malaysia, the tourist business has been flourishing since the early 1960s, but serious efforts to promote the industry only became evident after the establishment of the Malaysian Tourist Development Corporation in 1972. The early strategies for tourism development focused on increasing inbound tourism market, which was primarily due to the spending power of foreigners as compared to that of Malaysian nationals. Therefore, early attractions and facilities, such as holiday resorts at beach and highland areas, luxurious hotels, and casinos were developed in order to cater to the international tourists, which, at the same time, marginalized the domestic market.

When the country and other south-pacific regions, were hit by recession in 1997-98, it brought changes to the tourism industry that favored the domestic market. The tourist trade from such traditional, international markets as Japan, Singapore, Thailand, and Taiwan slumped and the Malaysian ability for outbound travel was significantly reduced. Accordingly, as stated by the Ministry of Art, Culture and Tourism or MOCAT (2000), the government was forced to re-evaluate its tourism policy and initiate campaigns to boost domestic tourism through various programs and activities aimed at creating awareness of local attractions.

One of the fastest growing destinations for domestic tourism in Malaysia is Langkawi, an island located about 51 kilometers off the west coast of the northern state of Kedah (Figure 1). The island has been aggressively developed and promoted since the late 1980s as a new domestic tourist destination and as a means of offsetting the outbound travels made by Malaysians to neighboring Thailand.

Figure 1
Location of Langkawi Island
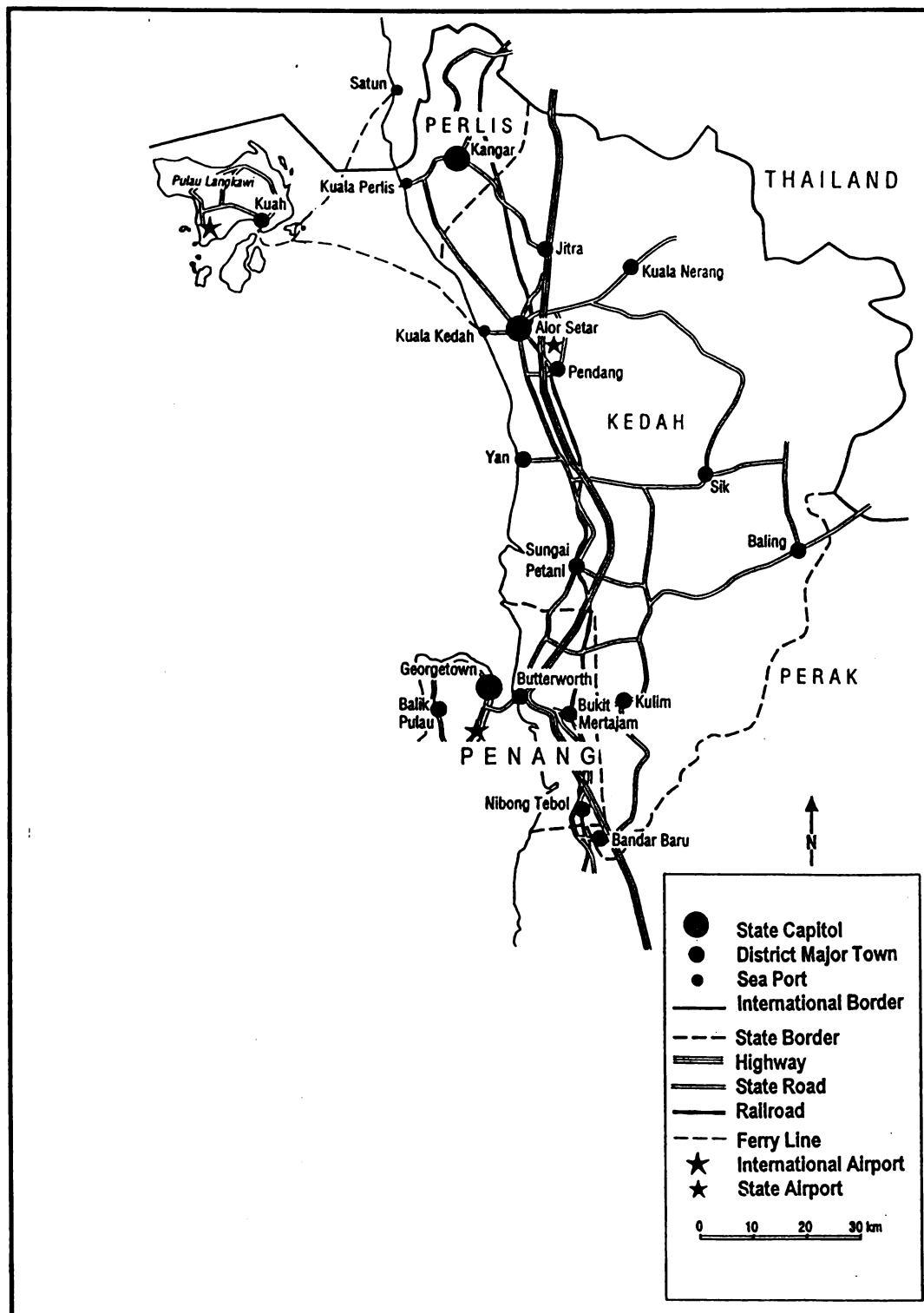
Some of the leisure and tourism opportunities offered by Langkawi Island center on its shopping complexes, seaside attractions, and entertainment. More importantly, however, historical attractions have become a substantial element of the holiday experience on the island (Din, 1990; State Planning Unit, 1994).

The major historical attractions on Langkawi include Mahsuri Mausoleum, Telaga Air Hangat (*Natural Hotsprings*), Makam Purba (*Ancient Tombs*), Beras Terbakar (*Burn Rice Field*), Gua Cherita (*Cave of Legends*) and Galeri Perdana (*Perdana Gallery*). Perhaps, underscoring the growing interest in such type of attraction, the Langkawi Development Authority (LADA) commissioned an inventory of historical attractions on the island in 2000. The project was partly funded by the American Express Foundation and produced a list of tourism sites, which were consequently promoted together as 'Heritage Trails'. The project also produced maps and brochures, which were distributed to visitors to help them plan their visit and enjoy more satisfying tourism experiences at the historical sites.

In addition, the island's natural and outdoor recreation opportunities, which include forest reserves, forest recreation areas, mountain ranges, marine sanctuaries, and wildlife and natural landscapes, are becoming popular attractions. Two of the most popular are Gunung Raya and Gunung Machincang, mountains famous for hiking, mountain climbing, and a waterfall called Telaga Tujuh, or *Seven-Steps Waterfall*. Sports and special events are also organized periodically and visitors can choose to experience a wide variety of major local and international events. In 2001, the island hosted such events as the Tour de Langkawi (conceptually similar to Tour de France), the Langkawi International Maritime and Aerospace exhibition, the Independence Month Celebration,

the International Culinary Fair and the International Kite Championship. Sports facilities

such as golf courses, archery centers and shooting ranges are also available to the public

at different locations on the island. Other types of attractions and locations are provided

in Table 1.

Table 1
Types of attractions on Langkawi Island

Types of Attractions	Key Attraction	Attributes
1. Agriculture Tourism Attractions	• Laman Padi • MARDI AgroParks	-Demonstration paddy fields and fruit orchards
2. Shopping complexes	• Langkawi Duty Free	- A vast shopping center, offering tax-free products.
	• Oriental Village	- Integrating shopping, culture and culinary attraction
	• Langkawi Crystaal	- Offering glass product and demonstration facility
3. Beaches	• Tanjung Rhu • Pantai Kok • Pantai Pasir Hitam • Burau Bay • Pantai Tengkorak	- Picnic area and shelters are provided in all area
4. Theme Parks	• Underwater World	- Marine-based theme park
	• Snake Sanctuary	- Showcasing tropical snakes in their natural habitat. Also provide facilities for research.
5. Holiday Resorts	• Datai Bay Resort • Sheraton Langkawi • Andaman Sea • Berjaya Resort • Pelangi Resort	- Most resorts incorporate the Island tropical jungle and local traditional architecture in their design and development.

Considering the wide variety of tourist attractions which Langkawi offers, planners, marketers, and service providers on the island must be able to create strategic tourism marketing plans for encouraging more visits and to better serve the needs of the market. However, the current tourism development practices on Langkawi Island have often showed a disregard for market research. Previous plans on the island were constructed without the benefit of comprehensive market research to provide necessary and crucial information. Research needs include assessing the demand for certain types of attractions or tourism experiences rather than trying to force-feed the market with types of services and experiences that the tourists do not want.

In addition, a review of literature dealing with Langkawi's tourism indicates a lack of important information about its domestic visitors. Information about trip characteristics, preferences, and perceptions could not be located. Market segmentation, which are commonly regarded as the cornerstone of tourism destination marketing plans, are non-existent.

A nation-wide survey, carried out by Tourism Malaysia in 1998 to compile information on domestic tourism, included such elements as travel patterns, trip characteristics, and demographic profiles (Tourism Malaysia, 1999). The study, however, was too generic and not designed to elicit information that was pertinent to any specific destination, especially Langkawi Island. The study did not draw together any information that could be translated into marketing strategies for local destinations; nevertheless, it illustrated the importance and potential of domestic tourism in the country, by reporting the number of trips made and estimating spending by tourists visiting various destinations within the country.

Considering Langkawi's current status as Malaysia's premier destination, the gaps in market information may lead to a misdirecting of investments in tourism development and further underestimate the potential and sustainability of the industry on the island. Inevitably, in-depth market research needs to be carried out to acquire a wider perspective on the domestic market and variables that may induce development of the market on Langkawi.

Problem Statement

In light of limited important marketing information on domestic tourism on Langkawi Island, this study will attempt to gather information such as visitor profiles, motivation for visiting, trip characteristics and travel behavior to aid in marketing the island's tourism. Particularly, this study is interested in determining how domestic tourists evaluate the attractiveness of Langkawi Island as a vacation destination, their perception of different types of attractions on the island, and the importance they assign to such attractions in their decision for visiting the island. A knowledge of Langkawi's strongest attributes and attractions will assist destination marketers to uncover what makes the island attractive to tourists . Destination marketers may want to ask such questions as 'how do tourists perceive each of these attractions?'; 'do tourists perceive one attraction to be more appealing than others in their decision to visit the island?'; 'if so, which attraction is it?'; and also, 'which attraction is perceived as the least appealing?'

Answering these questions, as well as discovering what makes Langkawi Island attractive to tourists, is crucial for several reasons. It will help to:

1) Identify the most preferred experiences and attractions on the island;

2) Ensure the highest tourist satisfaction from attractions and services provided on the island; and

3) Increase repeat-visits and ensure the sustainability of the industry on the island.

As stated in many previous studies, (Davis and Sternquist, 1987; Brayley, 1990; Hu and Ritchie, 1993) there is evidence of a relationship between the perceived attractiveness of a destination and a tourist's decision to visit that destination.

From a marketing point of view, it is crucial to identify those attractions and attributes of a destination which play a significant role in determining destination choice (Sirakaya, McLellan, and Uysal, 1996; Shifflet, 1999). These kinds of studies have concluded that tourists often base their decision for choosing *between* vacation destinations on the benefits obtained from a destination's attributes. At this stage, which is termed 'pre-purchase stage' (Norman, 1995), a tourist has yet to single out a destination to visit. The problem with these 'pre-purchase stage' studies, as critics will quickly point out, is that tourists are not only considering which destination to visit but may even be contemplating whether to take a vacation at all. Observing the more meaningful consumption behavior -- to choose and actually travel to a certain destination-- may carry more weight in explaining a tourist's attitude, including their evaluation about the attractiveness of the destination (Kucukkurt, 1981; Norman, 1995).

Therefore, the current research will focus on tourists who have already decided on a destination to visit (i.e., Langkawi) and are well on their way there. Since the decision to visit a particular destination has already been made, a study of the destination and its

attributes is beyond the scope of this study. As such, assessment will be made solely on the ability of different attributes of a chosen destination to appeal to tourists. Moreover, most of the previous studies on destination choice and attractiveness were conducted in developed nation settings. Rather than relying on such research, there is a need to start similar studies in developing countries, especially Malaysia.

As mentioned earlier with regard to the growing importance of historical attractions to Langkawi's tourism industry, special attention will be given to examining this type of attraction in further detail. It would be particularly interesting to discover if historical attractions on the island are evaluated differently from other attractions by tourists. Information gathered from such evaluations will allow the island's tourism marketers to assess the importance of such types of attractions to the industry. Findings may affect future strategic actions, including investments for developing and/or improving infrastructure at such attraction sites, therefore offering better attractions for the market.

Reflecting on the lack of market segmentation analysis on Langkawi and realizing the importance of such efforts for boosting tourism marketing plans, this study will also attempt to determine if segmentation on the island is possible. To this end, tourist attitudes toward the destination or the perceived attractiveness of the island will be the basis for identifying market segments on the island. The results may also help to establish a theoretical and methodological framework for subsequent tourism research in Malaysia.

Conceptual Framework

The conceptual framework for this study is based on Fishbein's multi-attribute model. Fishbein (1967) and Fishbein and Ajzen (1975) suggest that a person's attitude is a function of the strength of a held belief and also a person's evaluation of that belief. The general theoretical underpinning of Fishbein's model is that behavior is a function of what one believes and how much importance one places on that belief (Fishbein, 1967). In other words, behavior is an assertion by an individual that a given object (which would be applicable to a *destination* in a tourism study) possesses or does not possess certain qualities. Although there are many models derived from this attitude theory, Fishbein makes a distinction by focusing entirely upon an individual's attitude toward an object (with multiple attributes) and not on an attitude toward a behavior.

Due to the complexity of attitudes, measurement of a concept based only on a single overall attribute, the dimensions which compose attitude, could not be realized (Mahoney, 1982). Multi-attribute models, however, allow for an analysis of the various salient attributes people use in forming attitudes. Mahoney further noted that the purpose of many multi-attribute models, such as Fishbein's model, is to understand the intangible aspects of consumer behavior in relation to their consumption. In the field of tourism, the model can provide explanations for tourist behavior in relation to their travel experiences.

Fishbein's model, which is also known as 'attitude-toward-object' or ATO model, is an additive, multiplicative process (Matejka, 1976; Kucukkurt,1981; Brayley, 1990). This model indicates a theoretical belief that a person's attitude toward any object is a function of the total contribution by each belief. The idea is that an attitude toward an object will increase indefinitely with the addition of positive beliefs. By using such

summative models, along with the addition of favorable beliefs about an object, will tend to increase positive attitudes towards the object. Therefore, from a tourism perspective, a tourist's attitude toward a destination is, in a sense, a measure of that destination's attractiveness. More precisely, as Brayley (1990) commented, 'the attractiveness of a destination is a measure of how well a destination is perceived to accommodate tourist needs' (p.4-5).

Information about tourist attitudes helps destination marketers to improve their understanding of the tourism market. Comprehensive information should help in identifying which area or product needs to be changed for the better. For example, by employing attitude data, destination marketers will be able to identify which attributes or characteristics are perceived as the most and the least attractive to tourists. Attributes with the least attraction may need physical improvement or greater emphasis in their promotional programs. Accordingly, marketers may want to make the most appealing attributes the focal point of their promotional materials.

A review of tourism literature also suggests that previous experience influences a tourist's decision-making schema (Norman, 1995). Norman has described previous experience as 'the manifestation of an individual's expertise in the activity or with the attraction, and knowledge about alternatives' (p.58). Previous studies such as Prince (1990), Hu and Ritchie (1993), Chen (1996), Court and Lupton (1997) and Shifflet (1999) have shown that previous experience was an important influential factor in tourist attitudes toward destination (i.e., perceived destination attractiveness) and travel behavior. Therefore, the present study postulates that a visitor's amount of previous experience with a destination may influence their attitude and travel behavior, including

attribute preference, the perceived destination attractiveness, and ultimately their decision to visit (or re-visit) the destination.

Research Objectives

The two primary purposes of this study are: (1) to assess the attractiveness of Langkawi Island as a destination for domestic visitors and, (2) to evaluate domestic visitors' perceptions and the importance they assign to various types of attractions as a means of segmenting the island's domestic tourist market.

Specifically, the study is designed to:

1. Assess domestic visitors' perceptions of different types of attractions on the island;

2. Assess the relative importance of different types of attractions in domestic visitors' decision to visit the island;

3. Ascertain the relative importance of Langkawi's historical attractions compared to other types of attractions in determining visits to the island;

4. Determine if previous experience visiting the island influences the importance assigned to various types of attractions;

5. Compare how repeat and first-time visitors assess the attractiveness of Langkawi Island and its various types of attractions, particularly historical attractions; and

6. Segment domestic visitors to Langkawi Island based on the importance they assign to various types of attractions and their perceptions of the availability of such attractions on the island, and determine if the segmentation produces substantial, exploitable, and reachable market segments.

Definition of Terms

The following are definitions of terms that are used throughout this thesis as it is important that readers have a common understanding of the terms used. Some of them are adopted from those provided by other authors.

Attraction

A location where travel experience actually takes place (Stanley, 1995). It may also mean features or characteristics that are perceived to be significant in tourist-making decisions for visiting a destination. Eight attraction types on Langkawi Island (historical attractions, beaches, theme parks, shopping complexes, sport and special events, nature and outdoor recreation, agriculture-tourism attractions, and holiday resorts) are the focus of this study.

Destination

A region or locality which contains one or more attractions and attracts tourists to stay temporarily (Lue, 1992). This study considered only Langkawi Island as a destination.

Attractiveness

A measure of the ability of a tourism destination to satisfy relevant tourist needs and desires (Brayley, 1990).

Attitude

A learned predisposition to respond in a consistently favorable or unfavorable manner with respect to a given object (Fishbein and Ajzen, 1975). In this study, 'attractiveness' is the measurement of visitors' attitudes toward Langkawi Island.

Domestic Tourist

Malaysian residents (excluding Langkawians) who take a trip from their permanent residence to Langkawi Island.

Measurement of Research Variables

Importance

This variable indicates the importance of each type of attraction in respondents' decisions to visit Langkawi. Respondents were asked (item #9 in the questionnaire):

'How important were the following tourism attractions in your decision to travel to Langkawi on this trip? Respondents were asked to indicate an *importance* rating for each type of attraction based on a Likert-type scale anchored by 0 (not important) to 4 (extremely important).

Belief

The variable *belief* indicates the respondents' perceptions of 'adequacy' or 'availability' of each type of attraction on the island. This was measured by the following question (#10): 'In your perception, what types of attractions are available on Langkawi Island?'. Respondents were asked to rate their belief on each type of attraction based on a Likert-type scale ranging from 0 (None available) to 4 (Many/much Available).

Attractiveness

This variable indicates the overall appeal of Langkawi as a tourism destination. This variable was measured based on the summation of the multiplicative scores (*belief* x *importance*) of each attraction type.

Previous experience

In this study, a respondent's previous experience was revealed by asking the question, 'is the current trip a respondent's first trip to Langkawi Island?'. This variable was measured by categorical responses of 'yes' (labeled as *First Time* visitor) and 'no' (labeled as *Repeat* visitor).

Significance of Study

The significance of this study was considered from two perspectives: (1) its contribution to the body of knowledge about travel and tourism, and (2) practical contributions for tourism marketing and planning, especially in the context of Malaysian tourism.

Firstly, an important theoretical contribution of this study is to enhance understanding of the role played by attitude toward destination in a tourist's travel choice process. In this study, attitude toward destination is represented by visitors' perceptions of a destination's attributes and the importance they assign to each attribute in influencing their visitation. The adoption of Fishbein's multi-attribute model in assessing tourist attitude may offer additional perspectives of the model's applications in the study of travel and tourism. The most significant difference in distinguishing this study from previous attempts to adopt the model in a tourist context, is the inclusion of types of attractions as destination attributes (as opposed to conventional environmental and physical destination's attributes) to be measured and tested. In essence, the adapted model enables the determination of a tourist's attitude toward a destination, while at the

same time allowing examination of different destination attributes (types of attractions) and their roles in promoting visits to destinations.

Secondly, the pertinence of this study is its use of actual travel data (contextual/situational selection data) as opposed to the use of contrived data. More precisely, this study uses data obtained from actual tourists who are departing to Langkawi Island. It is acknowledged that tourists may make choices at various stages; 'pre-purchase', en route or during actual travel, and on-site purchase stages. As mentioned earlier, the majority of choice studies were focused on the 'pre-purchase' stage with very little on the sequential stages. Therefore, the results of this study may contribute to expanding the knowledge about tourists at an actual travel stage and provide a basis for further research in this area.

Finally, this study will provide practical suggestions to policy makers, tourism planners, and service providers on Langkawi (and Malaysia in general) for developing and promoting domestic tourism. As mentioned earlier, there has been little empirical research conducted to date on the domestic tourism market on the island. In this regard, the study will help in filling the void by enriching tourism literature about the market. The increasing popularity of tourism on Langkawi puts pressures on tourism planners and service providers to have a greater understanding of visitors to the island. Attraction management on the island should be supported by detailed market profiles: data on visitor preferences, perceptions, expectations, and other psychological characteristics.

Additionally, the present study may also contribute towards estimating the level of use of different types of attractions, which has implications for infrastructure planning and investment decisions. Ideally, it is hoped that information gathered in this study will

help to develop a product mix that will be better adapted to the needs of domestic

visitors, while taking advantage of the unique characteristics and resources available on

the island.

CHAPTER 2

LITERATURE REVIEW

As has been stated previously, the purpose of this research study is to assess the attractiveness of Langkawi Island as a tourist destination, and to evaluate both first-time and returning visitors' perceptions of the island's tourist appeal. In order to support this assessment, Chapter 2 will provide a review of the literature which addresses the:

1) Concepts and factors of destination attractiveness;

2) Multi-attribute attitude models, which serve as the research framework of the present study;

3) Previous experiences of tourists, which provide an important variable for explaining and predicting tourist travel decision; and

4) Market segmentation of tourists' attitudes toward a destination

Destination Attractiveness

In various research articles published in the tourism field, attempts have been made to define and measure destination attractiveness (Matejka, 1976; Ritchie and Zins, 1978; Kucukkurt, 1981; Mayo and Jarvis (1981); Brayley (1990), and Hu and Ritchie (1993). One definition, as provided by Kucukkurt (1981), for example, described attractiveness of a destination as an interaction between the valence of destination attributes and people's expectation about a destination. Mayo and Jarvis (1981) conceptualized attractiveness as "a combination of the relative importance of individual benefits and the perceived ability of the destination to deliver (those) benefits" (p.24). Similarly, Hu and Ritchie (1993) described destination attractiveness as a reflection of

"the feelings, beliefs, and opinions that an individual has about the destination's ability to provide satisfaction in relation to his or her special vacation needs" (p.25). Thus, it appears that the existing definitions of attractiveness center around people's expectations and perceptions of a destination. Such ideas have an enormous marketing implication since they provide one of the most important reasons why tourists make a destination choice. Researchers, such as Um and Crompton (1990), suggested that tourists decide to visit certain places - because of certain factors or attributes that make those places appealing.

Factors of Destination Attractiveness

From a marketing point of view, it is imperative to identify factors that play significant roles in determining the attractiveness of a destination. As suggested by much of the reviewed literature, there are several factors that contribute to enhancing the appeal of a destination. These are summarized in Figure 2. The model shows destination attractiveness as comprising five important factors:

1) Social and Cultural Factors, which include local hospitality, a pleasant attitude toward visitors, price levels for services, ease of communication (such as English speaking population), and unique customs, arts, and crafts;

(2) Physical Attributes, which include man-made attractions such as theme parks, shopping areas, and architectural and recreational facilities;

(3) Natural Attributes, such as the area's natural beauty, unique landscape, and outdoor attractions;

(4)   Ancillary Attributes, including the area's infrastructure, accommodation

and dining facilities, and transportation;

(5)   Geographical Factors, such as location and accessibility, weather/climate,

and unique geographical features.

Figure 2
The dimensions of destination attractiveness

GEOGRAPHICAL FACTORS
Location
Accessibility
Weather/climate
Unique features

SOCIO-CULTURAL FACTORS
Local hospitality
Pleasant attitude
Price level
Communication
Arts and crafts

PHYSICAL ATTRIBUTES
Theme parks
Shopping areas
Architectural
Recreational facilities

DESTINATION ATTRACTIVENESS

ANCILLARY ATTRIBUTES
Infrastructure
Accommodation and Dining
Transportation

NATURAL ATTRIBUTES
Natural beauty
Unique landscape
Outdoor attractions

Of all of the dimensions of attractiveness outlined above, the physical and natural attributes can be considered the core dimensions and are consequently the focus of the present study. The relevance of these dimensions, culled from previous tourism research is provided in the following paragraphs.

Studies, such as Hu and Ritchie (1993) include physical, natural, and man-made dimensions of attractiveness in their research. Attractiveness is conceptualized as consisting of destination attributes which include scenery, climate, local people, barrier to language, museum, and cultural attractions. An earlier study by Goodrich (1978), mixed physical attributes (both man-made and natural) with social attributes such as destination attractions. The physical attractions included: facilities for water sports (such as beaches, swimming, water skiing etc.); facilities for other sports like golf, tennis, etc; historical and cultural attractions (e.g., museums, monuments, historical buildings etc.); natural and scenic beauty; shopping facilities; and entertainment places. Social attractions, such as 'pleasant attitudes of the people,' were also considered by Goodrich.

Goodrich's study has been duplicated and tested for Michigan's tourism market by Davis and Sternquist (1987). The latter study was designed to determine tourists' perception of Traverse City, to find out which features attract tourists and to identify market segments for the destination. Ten attributes, including water-based attractions, sport and entertainment attractions, historical and cultural sites, and shopping and nightlife attractions, were tested as possible determinants of the area's appeal. The study found 5 attributes; water-based attractions, scenic beauty, rest and relaxation, accommodations, and people's attitude consistently emerged as those most highly valued by the respondents.

In another study of tourist attitude by Ritchie and Zins (1978), attempts to identify the attributes influencing the attractiveness of a tourism region drew the following conclusion:

Natural climate and beauty was clearly judged the single most important determinant of the attractiveness of a given region. Cultural and social characteristics were judged second in importance, followed by attitudes towards tourists, accessibility of the region, infrastructure of the region, price levels, sport-recreation facilities and shopping facilities (p. 260).

Similar attractiveness determinants were also evident in a study conducted by Thorsteinsson (1992) in Iceland. It was found that most foreign tourists go to Iceland mainly because of the scenery and specific geological features, such as mountains, waterfalls, glaciers, and hot springs which were recorded as the most important determinants of Iceland's attractiveness. Weather attributes, however, were found to be moderate, or at least important determinants. This, in the researcher's own words, was expected since 'tourists going to Iceland are not looking for warm temperatures [and] a lot of sunshine..' (p. 52).

In a more recent study, Shifflet (1999), in an unpublished report on Pennsylvania heritage tourism study, found that the state's historical attractions were perceived as highly attractive compared to other neighboring states' attractions, including Washington DC, Virginia, and New York. Respondents also indicated that among those historical attractions in the state, Gettysburg, Philadelphia, and the Liberty Bell came through as the most important elements of Pennsylvania's heritage image. This was followed by other physical attributes such as the Amish communities, Pennsylvania Dutch country, Civil

war attractions, and places related to the Founding of America (e.g. Valley Forge, Independence Hall).

Similar physical environments were also used and tested as attributes by Ballantine (1991). In her study on Canadian ecotourists' motivations for traveling to Kenya, destination attributes were measured as 'type of attraction sought while traveling to Kenya.' Respondents were asked to indicate the value of each of the 37 attraction types when choosing the country as a vacation destination. These attraction types include 'wilderness and undisturbed area', 'rural areas', 'beaches', 'resort areas', 'mountains', 'shopping', 'historic sites', 'outdoor recreation', 'local festivals and events', 'national parks', and 'first class hotel'. These attributes were then used as the basis for determining if the respondents could be classified as 'ecotourists' or not.

Vague or indeterminate characteristics, such as warm weather, amount of sunshine, or generally good weather and friendly attitudes toward tourists are not included in the present study. An area's weather or climate characteristics hardly qualify as specific features or proper tourist attractions (Ferrario, 1976). Although often listed as such in some previous tourism studies, the real pulling power to a destination remains the presence in that area of "something interesting or unusual to see or to do" (Ferrario, 1976; p.9) or in other words, a set of natural and/or man-made attractions available in the area. Not all areas with suitable climate are necessarily tourist destinations. Even poor climate or uncertain weather conditions are not necessarily a deterrent for tourism. Therefore, pleasant climate, sunny weather, friendly locals and low cost can be regarded only as essential supporting features for tourists' enjoyment of a destination.

In the end, the concept of 'attraction types' as used by Brayley (1990) and Ballantine (1991) to refer to destination attributes, was judged to be most applicable to the present study. This approach enabled the researcher to study the role of each individual attraction type in determining the destination's overall interest. Consequently, this study will include those attraction types frequently associated with Langkawi Island as the destination attributes to be examined: historical attractions, beaches, theme parks, shopping complexes, sports and special events, nature and outdoor recreation, agriculture-tourism attractions, and holiday resorts. This will facilitate the determination of the strengths and weaknesses of the tourism 'product' on Langkawi Island.

Measurement of Attractiveness

This section provides a review of several past studies of tourism in order to illustrate the different methods of assessing destination attractiveness. Tourism literature, in general, indicates two typologies of destination attractiveness studies. The first is represented by the investigation of the actual visitation patterns; the second measures the perceived attraction generated by a single resource or by a region or destination (Formica, 2002). The first approach is based on the belief that visitation or consumption characteristics are relative to the attractiveness of the area (Oppermann, 1994). This demand-as-indicator approach assumes that one's destination is more attractive than others because it receives more visitors. Similarly, such studies may also use tourism expenditure or length of tourist stay as attractiveness indicators of a destination. Arguably, if a destination is very attractive, it will encourage tourists to stay longer and spend more money in the area.

Perdue (1996), for example, uses visitation data as part of the indicator for the attractiveness of the downhill skiing destinations of Colorado. Data were obtained from 16 of 27 ski areas in the state. For each ski area, estimates of total visitation from the study areas were calculated by multiplying the percentage distribution of visitors by lift ticket sales. The ski area estimates were then averaged to form the statewide estimates used to indicate the attractiveness of the industry.

Among the mentioned sources of measuring attractiveness, tourist perceptions appear more accurate than actual visitation or tourism receipts (Formica, 2002). In fact, tourists are the ultimate judges in determining the level of attractiveness of a region. This is because, as suggested by Echtner and Ritchie (1993), perceptions are reality in the traveler's mind; therefore it does not matter how many tourism resources are available in a given area when its overall attractiveness has already been defined. In perception studies, destination attribute is often used as the primary measurement for destination attractiveness. Attractiveness is viewed as a function of objective and subjective assessments of the features of a given destination. Destination features or attributes, including unique physical features, significant historical and cultural elements, and friendliness of its people, are assessed to develop attractiveness indexes.

One study by Gearing, Swart and Var (1974), for example, assesses the attractiveness of multiple destinations in Turkey, by considering a set of determinant attributes. The study was originally designed to facilitate the distribution of financial allocations in tourism investment in the country. The results also served as an indicator for tourism attractiveness of several regions in Turkey.

According to the study by Gearing et al. (1974), the attractiveness of the country can be represented in a model as:

$$T_j = f(N_j, S_j, H_j, R_j, I_j)$$

Where

T_j	=	The attractiveness of destination
N_j	=	Natural factors in region j
S_j	=	Social and cultural factors in region j
H_j	=	Historical factors in region j
R_j	=	Recreational and shopping factors in region j
I_j	=	Accessibility and accommodation factors in region j

Following this early work of Gearing et al., many later attractiveness studies have helped to illuminate some important issues including the question of what and how many attributes should be included in calculating destination attractiveness. While Gearing et al., identified 17 attributes in Turkey, others like Goodrich (1978) developed 10 attributes during his study of nine tourism destinations including Florida, Hawaii, Mexico and California. Ritchie and Zins (1978), extended the method of Gearing et al. for measuring the relative importance of eight general and 12 social and cultural attraction categories, by using Quebec as a case study. In comparing factors affecting destination choices between Turkey and Greece, Kucukkurt (1981) used 29 destination attributes which were later factor-analyzed and reduced to 10 main dimensions (such as the novelty of attraction, and touristic conveniences). Hu and Ritchie (1993), however, agreed that the attribute listings must demonstrate their importance and relevance to the destination under study.

Additional reviews of literature have also indicated a supply-side approach to tourism attractiveness studies. These types of studies normally investigate and measure tourism resources and their spatial distribution. The supply perspective determines the overall attractiveness of the destination by performing an inventory of existing tourism resources. In one study, Richard (2001) analyzed what constitutes destination attractiveness by examining the different attributes of a Chinese-themed park in Holland called 'the Sweet Lake China'. The park was established to present famous Chinese landmarks in the form of miniature buildings. Visitors were shown examples of Chinese living culture such as the tea ceremony, different kinds of food, and clothing as intriguing aspects of the park. Entertainment elements, such as music, dance, acrobatics, and martial arts were also considered attractive factors of the park.

Chen and Hsu (2000) developed critical attributes tied to destination image to measure the total attractiveness of a destination. Their study was intended to uncover destination attributes influencing Korean tourists' perceived destination image and explored the relationship between tourists' perception of attractiveness and their decision to travel abroad. The study used 18 generic destination-related attributes to measure the perceived attractiveness and found attributes such as adventure, scenery, environmental friendliness, availability of tourist information, and unique architecture as the defining factors for attractiveness.

As indicated earlier, tourist perception was arguably the more accurate source of attractiveness measurement. One major contribution of those perception-attractiveness studies was the introduction of multi-attribute models in providing the necessary research framework to measure destination attractiveness. This multi-attribute approach to has

received considerable attention in the tourism literature because it enables examination of attitudes or beliefs toward selected product (or tourism destination) attributes, including the value tourists attach to each attribute in their travel decision.

In his study of multiple destinations in Texas, Brayley (1990) quantifies the concept of attractiveness through the application of the multi-attribute model. In Brayley's model, the degree of importance of each destination attribute to individual tourist trip decision is labeled as 'centrality'. This centrality indicates the value to the tourist in his/her 'successful' consumption of the destination attributes. The strength of tourist belief on quantity and quality of destination attributes in the state of Texas was labeled as 'evaluation'. Destination or tourist attributes in the study were represented by 13 attraction types which included 'High Country', 'Lakes', 'Historic Sites', 'Ethnic Settlements', and 'Ranchlands'. Often, the multi-attribute models were able to let researchers study multiple attractions or destinations in details. Therefore, given the appropriateness of this type of behavioral model to the present study, the model will be elaborated on in the next section.

The Multi-Attribute Model

This section focuses on the multi-attribute model which serves as the research framework of the present study. This model was made well known by Fishbein (1967), who was generally credited with its development, although many of the models now employed bear only superficial resemblance to the one he originally advanced (Davis, 1986). The multi-attribute attitude model is based on the premise that a consumer's desire for specific attributes and his or her beliefs about the ability of an object to deliver

these attributes will govern his or her preference for that object. For tourism research interest, the model proposed by Fishbein (1967), which was also known as the 'attitude-toward-object,' is especially suitable for measuring attitudes toward tourism destination. According to the 'attitude-toward-object' or ATO model, tourists' attitudes toward a destination is a function of:

- the presence or absence of specific destination's attributes (*beliefs*), and

- evaluation of certain destination-specific preference (*importance*)

The Fishbein model was also generally classified as a linear-compensatory model. This classification reflects the ability of the model to recognize the trade-off between the attitude scores. In the multi-attribute model, the perceived strength of one attribute can compensate for weakness in another attribute. These scores are averaged producing a single, uni-dimensional score representing the overall attitude. In other words, attribute identities are lost during the summative process (Scott, Schewe and Frederick, 1978).

The strength of Fishbein's ATO model includes widespread empirical testing, quantitative measurement, and easy adaptation to various situations. In fact, components of a multi-attribute model can appropriately be adapted for many product-purchase situations including vacationing.

In its tourism application, the model is usually cited in the following mathematical equation:

$$\text{Attitude}_o = \sum_{i=1}^{n} b_i e_i$$

Where Attitude_o is an overall assessment of affect for (or against) the destination, b_i is the strength of the belief that the destination contains the $_i$the attribute. e_i is

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the evaluation associated with the degree to which the $_i$th attribute is desired by the tourist. The Σ indicates that there is n (total number) of salient attributes over which the b_i and e_i are summated. The elements of these factors (multiplied) are added together to form a uni-variate attitude score (Scott, Schewe and Frederick, 1978).

In its tourism application, the ATO multi-attribute model and the attitude score were used to determine destination attractiveness (Matejka, 1976; Goodrich, 1978; Brayley, 1990; Carmichael, 1991; Hu and Ritchie, 1993, Turner and Reisinger, 2000). Matejka (1976) for example, examined tourist's attitudes toward 28 randomly chosen destination attributes for the state of Arkansas. Tourist attitudes, or the perceived attractiveness of the state were measured along a multiplicative model of 'adequacy-importance'. Tourists were asked to rate the amount of each vacation attribute that they perceived the state of Arkansas to possess (referred to as *adequacy* in the model). They were also asked to indicate the importance of each attribute in their decision to choose an ideal destination. The attitude scores (*importance* times *adequacy*) were added together from all attributes to give a composite score representing the total attractiveness of the state as a destination.

One study by Scott et al. (1978) tried to link preferences for Massachusetts with perceived attractiveness of the state, as compared to other New England states, by using a multi-attribute model framework. By employing a mailed survey, they instructed respondents to rate each of the four New England states. Each state was evaluated in terms of the same set of 18 state attributes. The state attributes included such universal characteristics as 'cleanliness of state,' 'familiarity with state,' 'the scenic quality,' 'the image of historic places,' and 'quality of state park.' Respondents were grouped into two categories: those who would choose Massachusetts as a destination and those who would

rather choose other states as their destination. By using the multi-attribute model they managed to conclude that those who chose Massachusetts perceived the state as highly attractive in terms of friendly people, more relaxing, more cultural, and less commercialized compared to the other states.

Similar approaches were also employed by Carmichael (1991) in her investigation of the decision-making process of skiers in the anticipation (planning) stage for Victoria, British Columbia during the 1990 ski season. Their spatial patterns and movements were predicted in relation to their images of the potential resorts located in the study region. A method was developed to use a multi-attribute model as a measure of tourist image. Therefore, salient attributes were identified and used to measure the ski resorts' attractiveness. Six key attributes – snow conditions, variety of runs, lift lines, value for money, staff friendliness, and access to home were tested against skiers' beliefs and attitudes. Most of the 359 respondents believed that all six attributes were important to their ski enjoyment during the next trip. Variety of runs and snow conditions were found to be the most valued attributes. In order to complete the attractiveness measurement, respondents were also asked how much they believed resorts under study possessed those six attributes.

As these studies indicated, the overall appeal of a destination to an individual is determined by the valence of different destination attributes to the individual. The studies were also able to show that tourists prefer to visit those destinations which have attributes or characteristics which they consider to be important to their satisfaction. In most cases, tourists considered more than one attribute when *choosing a destination to be visited*,

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hence the importance of addressing the subject of destination choice by using multi-attribute models.

The present study, however, is only interested in examining those tourists who *have already selected* their vacation destination. To reflect this unique situation and the fact that there is no need to make comparisons between destinations, this study employed a variation of ATO model as originally introduced by Fishbein (1967) and is presented in the next section.

The Modified Attitude-Toward Object Model

The modified model which is similar to models tested and used by Matejka (1976) Brayley (1990) and Hu and Ritchie (1993) is called 'Destination Attractiveness Model' and can be shown in the following equation:

$$T_i = a_i = \sum_{k=1}^{n} B_{ik} E_k$$

Such that

T_i	=	Attractiveness of destination (*Attractiveness*)
a_i	=	An unidimensional measure of respondent $_i$'s attitude toward destination
B_{ik}	=	The strength of respondents $_i$'s belief that attraction type $_k$ is possesed by destination (*Belief*)
E_k	=	The degree of importance of attraction type $_k$ to attract respondent $_i$ to destination (*Importance*)
n	=	Number of attraction types

The Destination Attractiveness Model has the same core variables as the original ATO model. It is modified by specifying *attractiveness* as an indication of an individual's attitude toward destination. The basic components of the ATO model – *importance* and

belief are retained in the modified version. This will enable the current study to uncover how the availability of each type of attraction was perceived by visitors and the relative importance of those attractions in determining visitation to the destination. Hu and Ritchie (1993) believe that determining the relative importance of each destination attribute in influencing people's evaluations of the attractiveness of a tourism destination, is the most critical measurement aspect of tourism attractiveness. This is because such evaluations are more likely to serve as behavior (for example – choosing a destination) determinants.

The concept of 'attraction types,' as used by Ballantine (1991) and earlier by Brayley (1990), to refer to attraction types as destination attributes, was judged to be the most applicable to the present study. This approach enabled the researcher to study the role of each individual attraction type in determining the destination overall attractiveness. Consequently, this study will include those attraction types frequently associated with Langkawi Island as the destination attributes to be examined. These attraction types are: historical attractions, beaches, theme parks, shopping complexes, sport and special events, nature and outdoor recreation, agriculture-tourism attractions, and holiday resorts. As suggested by Ap and Sandiford (1998), such attractions can offer a competitive advantage to a destination. Answering the question, 'which attractions were seen as the most appealing to tourist?' should be a cornerstone for strategic marketing of a destination (Goodrich, 1978).

Previous Experience

The previous experience construct is now seen as an important variable in explaining and predicting tourist travel decisions. This dimension was included in the present study with the hope that a measure of a tourist's previous visitation to a destination would be a significant predictor of their attitude toward the destination. In other words, the present study would like to compare how previous visitations have affected the way tourists assess the attractiveness of a destination and also determine if their previous experience influenced the value they assigned to various attractions available at the destination.

In leisure and travel literature, *previous experience* is frequently described interchangeably with *prior visitation, familiarity, destination awareness*, and *destination experience*. Previous experience was cited as a rather observable measure compared to other variables, such as motivation, involvement, and perceived constraints (Norman, 1995). Previous experience has also been described as a measure of an individual's expertise in activity, his knowledge about activity, and knowledge about alternatives (Prince, 1990). As a result, the amount of previous experience could influence an individual's attitude, including, as in the case of the present research, his perception of destination attractiveness and ultimately his decision to visit a destination.

Hu and Ritchie (1993) contend that familiarity with a destination, which is influenced by such factors as previous visitation and overall knowledge about a destination, plays an important role in influencing an individual's perception (and, therefore, the attractiveness) of a particular destination. In their study on determination of destination attractiveness, they were also particularly interested in finding out if

familiarity influences a tourist's perception of destination attractiveness. 'Familiarity' was measured in terms of previous experience, whether or not respondents had been to a destination. Five destinations, Hawaii, Australia, Greece, France, and China were selected to reflect differing degrees of previous experience with destinations on the part of respondents. Sixteen attributes (physical and social) were tested to determine their roles in destination attractiveness. The influence of 'familiarity' on the perceived attractiveness was examined by employing student t-tests. It was concluded that the perceived attractiveness of each of the destinations was influenced favorably by previous visitation experiences with the selected attributes.

Court and Lupton (1997) examined how factors, such as destination image, destination experience, and demographic characteristics, combine to influence perceived destination attractiveness and tourists' intentions for visiting the destination. The research was carried out in the state of New Mexico among 900 out-of-state residents. 'Destination experience' was used to describe respondent's previous experience at a destination. A dependent variable, 'intention to visit,' was tested against destination image and previous experience. Destination image was measured by asking respondents to state the extent of their satisfaction with 24 image items. Factor analysis, multiple regression, and multinomial logit analysis were applied for data analysis.

One of the findings, among others, indicated that there is a positive relationship between previous experience and favorable destination image (or the perceived attractiveness of the destination). In conclusion, Court and Lupton stated that people who have experienced a satisfying vacation are likely to return. The findings assuredly echoed the importance of previous experience in travel decisions as shown by earlier studies (for

example, Mayo, 1979; Woodside and Lysonski,1989). These studies suggest that the number of previous visits to certain destinations influenced favorable perception or image and encouraged subsequent visits. As summarized by Mayo, comparisons of image often lead tourists to choose one destination that promises to provide them with the greatest amount of satisfaction or offers the chance of obtaining the desired experience.

A review of literature also traced a link between previous experience with repeat visitation and destination brand loyalty. Oppermann's (2000) empirical study on destination loyalty to Australia was focused on the influence of previous experience and destination loyalty on destination choice. The study was longitudinal (using data collected over an 11- year span) and based on frameworks and concepts found in consumer behavior and marketing literature. The research proposed past travel behavior as a strong influence for current decisions and therefore could be used to predict future travel intentions as well. To test the hypothesis, the visitation frequency for the period studied was compared with the actual current travel (1995). As expected, those who were considered as 'very Australia loyal' (defined as making six or more visits to the destination) were found to re-visit the destination in 1995. On the other hand, the study found that those who were classified as 'unsteady' (who made just one trip) switched destination regularly. In conclusion, Oppermann believes that recognizing the role of previous experience will help destination marketers understand their target market better and encourage the desired re-visitation among tourists.

In addition to the emerging numbers of studies on previous experience in leisure and travel literature, there is also some research conducted along the lines of a smaller framework of tourists visiting historical attractions. One such study was conducted by

Prince (1990), who researched previous experiences of visitors (and non-visitors) to a selection of alternative historical attractions, particularly museums, in the United Kingdom. By using the theory of behavioral consistency, Prince hypothesized that previous experience with an attraction may produce an attitude toward attraction of similar types. The attitude may (or may not) motivate making a visit depending upon the specific attitude thus synthesized. For example, if people choose to visit museums, they should also opt for visiting similarly perceived sites.

The findings of Prince's research demonstrate a high degree of commonality between 'visitors to museums' and other types of historical attractions, such as castles, fortified buildings, and historic houses. Prince's (1990) study also found that the non-visitors opted to visit other types of attractions such as zoos, libraries, parks, and commercial exhibits. Further analysis of visitor's perceptions found that the overwhelming majority of respondents considered historic houses and stately homes as having the closest attributes or characteristics similar to that of a museum. Broadly speaking, visitors put attributes, that related to such places, as important determinants for their decision to visit. Prince also concluded that the findings were consistent with other propositions developed in other studies that previous experience is central to travel decisions, specifically destination choice.

In another study, Chen (1996) examined factors affecting visitors' evaluation of tourist preferences and choice alternatives in order to identify a tourism market for different historical attractions in Pennsylvania. The historical attraction covered in the study included historic railroads, museums, forts, historic villages and national memorials. The identified factors were grouped into two categories: salient factors (such

as miles traveled, days spent, and size of travel group), and latent factors (previous experiences). Previous experience was considered to be the amount (frequency) of previous visits and types of historical attractions visited. Tourist sociodemographic characteristics were also used as determinant variables. Among these factors, previous experience was found to be one of the important variables that influenced tourists' preferences (for types of historical attraction) and choice behavior. Sociodemographic characteristics, such as educational attainment, were found to be one of the grouping factors in profiling visitors to such attractions.

As noted in the previous chapter, following the review of literature on the subject, the present study postulates that a tourist's previous experience with a destination may influence their perception of the attractiveness of a destination and the value they attach to each attraction type available at the destination in making a (or their) travel choice.

Market Segmentation

One of the many important similarities among destination attractiveness studies was the implications of their findings that were pertinent to market segmentation. Much of the research, such as that done by Goodrich (1978), Davis and Sternquist (1987), Brayley (1990) and recently Schofield (2000), has employed segmentation techniques in identifying tourists' attitudes toward destination. Therefore, it is the intention of the present study to determine if similar techniques could be used to explore segments of visitors traveling to Langkawi Island. Since the topic of segmentation is abundant in tourism literature, it is not the intention of this study to cover the topic comprehensively,

but rather to give a brief overview on segmentation in order to present a general perspective on tourism segmentation to the readers.

Market segmentation was defined by Brayley (1990) as "the process of dividing a market into distinct groups of consumers with different characteristics, needs and behaviors" (p. 55). Therefore, the main reason for the segmentation process is to find groups of consumers with common characteristics related to purchase and use of products, programs, or services. The most promising groups, in terms of size, measurability, and profitability are selected as "target markets" and are the markets in which businesses decide to profile and focus their attention (Stynes and Mahoney, 1986).

In its tourism application, segmentation can be a very useful management tool for evaluating destinations' competitiveness (Spotts and Mahoney, 1991; Shoemaker, 1994; Prentice, Guerin, and McGugan, 1998). There are two reasons of utmost importance for conducting a tourism segmentation research: (1) to better understand target groups so that this information will enable marketers to create a strong advertising campaign, and (2) to gain competitive market advantage in positioning (or re-positioning) a destination by finding markets that might be receptive to promotional messages.

Factors, including demographic, behavioral, and psychographic have been used in tourism research as bases for segmenting the tourism market. Arguably, the most widely used, the behavioral segmentation base, includes variables such as attitude (perceptions and preference), motivation, image, product usage (heavy half), and expenditure (Spotts and Mahoney,1991). On the other hand, psychographic segmentation is also frequently referred to as lifestyle segmentation. It is generally based on some AIO (activities, interests, opinions), and VALS (values and life style) criteria or variables (Weber, 1992).

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A limitation of psychographic segmentation, however, is that it usually requires a complex approach in order to obtain information and requires a large number of questions to be asked through the research instrument.

To demonstrate the application of attractiveness measurement in destination marketing, especially in segmentation, some relevant studies are discussed here. In general, most of these studies (eg., Goodrich, 1978; Davis and Sternquist, 1987; Brayley, 1990) employed multivariate statistical methods of cluster analysis in identifying the market segments. Methods of analysis such as t-test, analysis of variance (ANOVA), and discriminant analysis were then used to distinguish and profile the identified segments. In one of the studies, Goodrich (1978) employed cluster analysis to group respondents based on the factors scores of the value ratings of the destination attributes. Three clusters were stipulated by the researcher and labeled as Group 1, Group 2 and Group 3. Group 1 was composed mostly of respondents who were interested in passive types of tourism attractions, such as scenic beauty and shopping. Group 2 consisted of respondents who were interested in sports attractions such as golf, tennis, and water sports. The final group was primarily interested in historical and cultural attractions.

In a similar fashion, Davis and Sternquist (1987) in their study on Traverse City, Michigan, based their cluster analysis on the 'attitude-toward-attribute' scores for segmenting the tourists into homogeneous segments. Clusters, or segments, were identified according to their attitude toward the destination. For example, cluster 1 was labeled as 'Least favorable', while cluster 4 was labeled as 'Satisfied customer'. ANOVA was used for contrasting the clusters (or segments) for their demographic and trip characteristics. These characteristics, such as gender, occupation, age, educational

levels, and income, failed to show any differences between segments. Trip characteristics

such as distance, length of visit, frequency of visit to Traverse City, composition of travel

party, and mode of transportation also appear to be similar for all segments. Although

they failed to correctly predict or profile the segments, Davis and Sternquist believe that

segmentation 'can help destination marketers profile an area's tourist [appeal] and help

develop promotional strategies based on these attitude profiles' (p.29).

The two attractiveness studies cited in the previous paragraphs can be classified as

a posteriori or factor cluster-based segmentation in which segments are separated into

groups based on a set of variables such as benefit, need, and attitude. Another type of

segmentation is called *a priori* segmentation in which the base for segmentation is

predetermined before a study can be carried out. In *a posteriori* segmentation, the size

and number of segments are previously unknown to the researcher. As the name

indicates, this approach involves carrying out various levels of factor and cluster

statistical analysis (Formica and Uysal, 1998). While *a priori* segmentation relies on

discretionary selection of variables by the researcher, *a posteriori* relies exclusively on

empirical delineation of segments. Therefore, as Formica and Uysal (1998) argued, *a*

posteriori segmentation is capable of producing more in-depth results than *a priori*.

Accordingly, *a posteriori* was the technique of choice for the present study in

determining the usefulness of attractiveness as the basis for segmentation.

CHAPTER 3

RESEARCH METHODS

This chapter gives a description of the research methods employed to achieve the study objectives and test the hypotheses. The first section outlines the research hypotheses that will be tested, along with a justification for each hypothesis. The second section focuses on methods used to collect the data needed to test the hypotheses, including questionnaire designs, administration of the survey, and sampling methods. The final section describes the procedures used to prepare and analyze the data.

Research Hypotheses

In order to achieve the research objectives, the following research hypotheses were tested:

Hypothesis 1: Domestic visitors to Langkawi Island assign more importance to historical attractions in their decision to visit the island than they do to any other types of attractions.

Justification: Marketing of Langkawi Island has focused on its historical attractions -the island has been dubbed the "Legends Island." If the advertising and image position has been successful it is likely that a large proportion of the visitors were there to visit its historical attractions. If historical attractions are not very important to the visitors, tourism marketers may need to consider a new advertising theme.

Hypothesis 2: Repeat visitors assigned more importance values for all types of attraction on their decision to visit Langkawi than the first-time visitors.

Justification: Researchers, such as Oppermann's (2000), contend that repeat visitation may serve as an indicator for destination loyalty. It is likely that repeat visitors, who have an established preference for the island, will consider the island's attractions as more important than first-time visitors.

Hypothesis 3:   Repeat visitors assigned more attractiveness value than the first-time visitors to Langkawi Island and its various types of attractions.

Justification: Literature review of previous visitation studies indicated that the amount of previous experience could influence individual's attitude including their perception of destination attractiveness and their decision to re-visit a destination (for example refer to Court and Lupton, 1997).

The final research objective is to determine if the perceptions of domestic visitors and the importance they assign to various types of attractions on the island can be used to identify substantial, exploitable and reachable market segments to guide marketing of the island. Substantiality, exploitability and reachability are three important criteria to determine the usefulness of segmentation results (Kikuchi, 1986; Myers, 1996). This final research objective can be translated into the following hypotheses:

Hypothesis 4:   The segmentation based on the attractiveness scores produces domestic visitor segments that are substantial in volume.

Hypothesis 5:   Domestic visitors to Langkawi Island can be grouped into identifiable and exploitable segments that differ in terms of their socio-demographic, trip characteristics, and travel behavior.

Research Design

A number of data collection methods were given consideration for their usefulness and viability. It was decided, finally, that an on-site self-administered survey, distributed and managed by trained technicians would be the best method to use. This decision was made for a number of reasons, the most important being that there was no available list of visitors to the island that could be used as a sampling frame. This ruled

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out the possibility of collecting data from telephone or mail surveys using an established

sampling frame. Therefore, it became necessary to both sample and collect information

on-site. Another reason is that Malaysians are not as accustomed to surveys as people in

the United States and a personal contact was considered important for achieving a higher

response rate.

In addition, a self-administered questionnaire distributed and delivered by trained

technicians has some of the advantages of a personal interview, but tends to be more

efficient, while at the same time reducing the chance of interviewer bias

(Kucukkurt,1981). Another advantage of personally distributing questionnaires to visitors

to be completed is that it greatly increases the number of questionnaires that can be

obtained and significantly reduces the cost of data collection. The method also facilitated

certain questions including repetitive importance and belief ratings. From previous

experience with personal interviews in Malaysia, the researcher discovered that the

method was not suitable for securing attitudes and other personal information

(Azlizam, 1994). Self administered questionnaires afforded people more privacy and the

technicians were always available on-site to answer any questions a respondent might

have.

The Sample and Sampling Procedures

The sampling population consisted of Malaysian (domestic) visitors to Langkawi

Island, who were 18 years of age or older and traveled to the island by ferry. Permanent

residents of the island were not surveyed. Foreign tourists were also excluded from the

survey because the primary purpose was to gather information about domestic tourists.

Also, foreign tourists are likely to have different levels of knowledge, motivation, and travel behavior than domestic tourists (McIntosh,1997).

Surveys were conducted from August 8th to September 2nd, 2001. The sampling site was the Kuala Kedah ferry terminal, which is one of the primary points of entry to Langkawi. The Langkawi Development Authority estimated that about 1.25 million people used the ferry service in 2000; about 60% of them arrived during the weekends and 40% during the weekdays (Suriati, 2001; personal interview). To better ensure the representativeness of the sample, about 60% of the questionnaires were completed during the weekends (Friday through Sunday) and 40% between Monday and Thursday. Surveys (including the pretest) were distributed on 26 different days (Appendix A).

Potential respondents were randomly selected as they entered the ferry departure hall. Every fifth person who entered was contacted either by the author/researcher or trained survey technicians. The purpose of the survey was immediately explained in that it was being conducted by a student from Michigan State University with the co-operation of Tourism Malaysia. Then they were asked about their willingness to participate. Willing respondents were then asked two screening questions: 1) were they visiting the island? (in order to determine that they were not residents of the island), and 2) were they 18 years of age or older? Persons who did not qualify were thanked and given information concerning the qualification criteria. When someone, who was sampled, was disqualified, the next person entering the hall was sampled. Qualified respondents were provided with a pencil, a copy of the questionnaire, and a clipboard. The researcher or one of the trained survey technicians was present at all times to answer any questions and provide additional information about the study and purpose of various

questions. This proved effective in reducing the number of incomplete surveys. Only 48

of the 873 distributed surveys were unusable, because a significant number of the

questions were not answered. Only 71 (7.5 percent) of the 944 persons contacted

refused to complete the survey, and of those people, most indicated they were too tired

and/or did not have enough time to participate. A total of 754 usable surveys were

completed and used in the analysis.

The Questionnaire and Pretest of the Questionnaire

The research questionnaire was first constructed in English and then translated

into the Malaysian language. This process allowed for it to be reviewed and edited by

faculty advisors at Michigan State University. The translation was necessary because

some residents of Malaysia are not proficient in English. To ensure that the final

Malaysian version was semantically similar to the original, the 'independent back

translation,' as explained by Yavas (1990), was employed. However, only the Malaysian

language version was used in the pilot and actual surveys.

The questionnaire was divided into 5 sections (Appendix B). The first two

sections asked for information about the respondent's travel behavior and trip

characteristics, (i.e., mode of transportation, reasons for the trip, length of trip, travel

party composition, activities they planned to participate in on the island and their

overnight accommodations). Section 3 consisted of a series of questions that asked

respondents to rate the importance of various types of attractions, how they impacted

their decision to visit the island, and their perception of the extent (amount) of these

attractions on the island. Attraction types included: historical attractions, beaches,

shopping complexes, sport and special events, nature and outdoor recreation, agriculture-tourism attractions, and holiday resorts. Section 4 included questions concerning previous trips to the island and past travel destinations, especially visits to historical attractions. The last section gathered information about the respondents' socio-demographic characteristics: age, gender, education level, income, occupation, and ethnicity.

The survey instrument was pre-tested over two days on ferries departing for Langkawi Island. The purpose of the pretest was to identify design, wording, and distribution problems before conducting the actual survey. Another purpose was to prepare for any possible questions from potential respondents. The results of the pre-test showed that the questionnaire was clear and understandable, and that the length was not a problem. The wording of a few questions was adjusted and the layout of a couple of other questions was modified, based on comments and suggestions from respondents.

Based on the pre-test, a decision was made to conduct the surveys at the ferry departure hall (on the mainland) rather than on the ferries as originally planned. It was determined that sampling would be easier and that it would be more convenient to complete the survey on dry land rather than on a moving ferry. It was also more convenient for visitors to complete the survey while they waited for their ferry. It was also much more efficient, in terms of time, to distribute all the surveys at the departure hall avoiding the need for survey technicians to make round-trips to the island.

Data Preparation and Analysis

After all the information was collected, it was coded and entered into a data base. A series of frequencies were run to ensure that the data was within the established response ranges. Any out-of-range and extreme values were checked against the original questionnaire entries and mistakes corrected. The attitude scale items were examined to determine their reliability. In essence, this was to answer the question, 'to what extent is the ability of the *importance* and *belief* items used in this study yielding the same findings on repeated occasions, given that the phenomenon of vacationing remains constant'. A reliability (alpha) analysis was conducted on both *importance* and *belief* items. A reliability of 0.839 was attained for the 16 items and this score was deemed acceptable for the purpose of this study.

Data Analysis

Data were analyzed using the Statistical Package for the Social Science (SPSS) version 10.0. A series of chi-square tests were first conducted to determine if there were any significant differences in the profiles of respondents interviewed during the pre-test on the ferries and those interviewed in the departure hall. Tests were carried out on four variables –gender, education, past visits (first time or repeat visits) and state of origin (Kedah or out-of-state). As expected, no significant differences were found.

The commonly accepted .05 level of statistical significance was the standard by which all statistical tests were conducted. Descriptive statistics, including frequencies, means, and standard deviations, were prepared in order to provide an overview of the respondents. Analytical procedures and statistical tests utilized for hypotheses testing

included t-tests (one-tailed tests), chi-square, and analysis of variance (ANOVA). Cluster analysis was employed to group visitors to the island into segments based on the group's perceptions and the importance they assigned to different types of attractions. Cluster analysis is the most common tool used by marketing researchers in market segmentation. Other multivariate tools, such as factor and discriminant analyses were not determined to be appropriate for the purposes of this study. Discriminant analysis, for instance, requires the segments to be predefined, which is common in *a priori* segmentation research (Norman, 1995). In this study, there was no information or past research available on possible visitor market segments on the island; thus *a priori* segmentation is impossible to be conducted.

The clustering was based on a uni-dimensional score (summed multiplicative scores of *importance and beliefs*) that provided one measure of the overall attractiveness of Langkawi as a destination. As described in the previous chapter and recommended by Davis (1986) and Davis and Sternquist (1987), the uni-dimensional score (T_i) represents the attractiveness of the destination. This multiplicative, additive process is in accordance with the Fishbein model previously discussed (Davis and Sternquist, 1987).

A *Quick Cluster* software package was employed to do the clustering. Quick Cluster is very efficient in that it does not require substantial computer resources. It produces only one solution for the number of clusters requested (Ipson, 1993). An additional specification of centroid cluster analysis was used as this sorts cases (respondents) and generates homogeneous groups based on the smallest distance between the case and the center of the cluster.

Once an attitude-based cluster (segments) solution was selected, the next step

was to describe the membership of the clusters and determine if and how they were

different from the membership of other segments. One way ANOVA tests were

conducted to test for differences on key marketing characteristics including age, length of

trips, size of travel party, previous visits to Langkawi, and the number of pleasure trips

taken in the last 12 months. Chi-square tests were also conducted to determine if

differences existed on various categorical variables including state of residency, purpose

of trips, intention to visit (or not) historical attractions on the island, awareness of

historical attractions on the island, previous experience (first-time or repeat), choice of

accommodation, and types of trip (day-trip or overnight). The findings from the different

analyses are presented in the next chapter.

CHAPTER 4

RESEARCH FINDINGS AND DISCUSSION

This chapter presents the results of various statistical analyses performed on the survey data. A descriptive profile of domestic visitors to Langkawi Island that includes their travel behavior, party characteristics, and their preferences and perceptions are reported first. Results, supporting or refuting the research hypotheses, are presented and discussed in the latter part of this chapter.

Characteristics of Domestic Visitors to Langkawi Island

As discussed in the last chapter, these results are based on surveys of 754 respondents intercepted at Kuala Kedah Ferry Terminal between August 1st and September 3rd 2001. About 1.25 million people traveled to the island by ferry in 2000. In contrast, about 300,000 persons used airline services to get to the island in 2000 (LADA, 2001). Sampling ferry customers and the timing of the surveys raises some questions relating to the representativeness of the survey findings. Obviously, persons who travel to the island by air are excluded from the survey and results. This may under-represent high-income visitors and persons traveling greater distances to reach the island. Also, the sampling period did not include the island's peak season. Peak travel in Malaysia is usually on weekends and school holidays. Malaysian public schools were in session during the interview period and only one long holiday weekend (the Independence Day weekend in late August) took place when surveys were being conducted. Therefore, the results may over-represent the older, childless, travel parties and in-state visitors.

In an effort to address the potential problems concerning the representativeness of the sampled population, comparisons were made with findings from a national domestic tourism study that was conducted by Tourism Malaysia in 1998; there were no comparable data currently available on visitors to Langkawi. Comparisons with the 1998 study were difficult because the studies employed different data collection methods and most of the data collected was not the same. However, the broad comparisons with information collected on the 1998 study provided an indication of how Langkawi visitors differ from general domestic tourists.

As shown in Table 2, the sample consisted of about 40 percent female and 60 percent male. A vast majority (76.5 percent) of the respondents were between the ages of 21 to 40. Perhaps the most striking demographic characteristic of the survey respondents was the small percentage of persons of retirement age. Only about 2 percent were 50 years or older, and only 6 persons indicated that they were 56 year old or older. The 1998 study by Tourism Malaysia reported about 4 percent of their respondents' ages 50 or older. The 1998 study also collected information from an equal proportion of men and women, since the data was collected through a quota sampling technique.

Table 2
Characteristics of respondents

	Percentage	1998's Tourism Malaysia Study (percentage)
Gender (n=754)		
Male	60.1	49.6
Female	39.9	50.4
Age (n=754)		
Under 20 years	7.6	28.1
21 to 25 years	22.0	10.6
26 to 30 years	23.9	12.8
31 to 35 years	15.6	n/a
36 to 40 years	15.0	26.7
41 to 45 years	8.5	n/a
46 to 50 years	5.0	17.6
Over 50 years	2.4	4.2
Highest Education (n=754)		
Primary	4.0	13.9
Seconday	56.5	70.1
Tertiary	39.5	16.0
Employment (n=754)		
Full-Time	74.0	n/a
Part-Time	2.3	n/a
Own Business	9.7	n/a
Student	10.9	n/a
Homemaker	2.4	n/a
Retired	0.8	n/a
Monthly Income (n=754)		
RM2,000 or less	53.7	54.8
RM2001-RM4000	39.3	28.7
RM4001-RM6000	4.9	6.6
RM6,000 or more	2.1	9.9
Ethnic Group (n=754)		
Malay	68.8 (66.1)*	72.0
Chinese	20.7 (25.3)*	19.0
Indian	10.1 (7.4)*	9.0
Others	0.4 (1.2)*	n/a

* Malaysian population in parentheses

The majority of respondents in the current study (almost 60 percent) had completed the lower level of education. This level includes both primary and secondary education which is equivalent to elementary and high school in the United States. Visitors to Langkawi are on average more educated than the general domestic tourist population as indicated by the 1998 study. About 40 percent of the island's visitors had completed college and university compared to just 16 percent of domestic tourists identified in the 1998's study. A vast majority of the Langkawi visitors (74 percent) were employed full-time. A comparatively low number (2.3 percent) were employed part-time and about 10 percent indicated self-employment. Eleven percent of the island's visitors were students. Slightly over 3 percent of the respondents were either homemakers or retired.

The monthly household income levels for Langkawi domestic visitors varied greatly. Only a few earned more than RM10,000 per month or about $2,700. This conversion calculation was according to the official exchange rate on October 30, 2001; one US dollar equaling RM3.75. More than half (54 percent) of the domestic visitors arriving by ferry earned less than RM2,000. Middle income persons, earning RM2000-RM6000 represented 42 percent of the visitors. About two percent are high income earners, making more than RM6,000.00 per month. The average monthly household income of the visitors was RM2372.00 and this was much higher than the national average which stands at RM1434.90 (Malaysian Government, 2000). In comparison, the 1998 Study indicated that 10 percent of domestic tourists have monthly incomes of RM6,000. However, the overall income distribution of visitors to the island parallel closely the incomes of domestic tourists identified in the 1998 Study.

Table 2 also shows the ethnicity of domestic visitors to the island. The majority (68.8%) are 'Malay', while persons of Chinese (21%) and Indian (10%) descent make up a sizeable portion of visitors. The 1998 study showed a similar distribution among the general domestic tourists. In general, visitors to the island and domestic tourists are representative of the country's ethic populations as reported in the latest national census (Malaysian Government, 2000). Malay remains the largest ethnic group in the country (about 66%) followed by Chinese at 25.3 percent and Indian (7.4 percent).

As presented in Table 3, about half of the visitors to the island are from states other than Kedah. Most of these 'out-of-state' visitors came from the neighboring state of Penang (14%), followed by Selangor (9.2 %), Wilayah (8.9%) and Perak (8%). The remaining 12.2 percent come from eight other states. Again, as mentioned earlier in this chapter regarding timing of the survey, this finding might represent the typical groups of visitors to Langkawi during this particular time of the year.

Table 3

Classification of respondents by state of permanent residency

State	Number of Responses	Percentage
In-State (n=361)		
Kedah	361	47.9
Out-of-State (n=393)		
Perak	60	8.0
Selangor	69	9.2
Pahang	23	3.1
Kelantan	9	1.2
Johor	22	2.9
Melaka	8	1.1
Negeri Sembilan	12	1.6
Penang	103	13.7
Perlis	8	1.1
Wilayah	67	8.9
Sabah	5	0.7
Sarawak	4	0.5
Terengganu	4	0.5

Trip Characteristics

The survey collected information on a variety of trip characteristics of domestic visitors to the island including main mode of transportation to reach the ferry, reasons for visiting Langkawi Island, length of time away from their homes, the length of stay on the island, accommodation on the island, travel party size, number of children in travel party, intentions for participating in various activities on the island including visiting historical sites. This information was important because there was no similar information about

visitors to the island available, and the information was used later to profile various market segments for the island.

About 70 percent of domestic tourists traveled from their homes to the Kuala Kedah Ferry terminal by car or motorcycle. The remainder used public buses (12.6 %) and taxis (10.5%). There was no direct train service to Kuala Kedah. While there was a train station at the nearby city of Alor Setar, train passengers may have used taxi or public bus service to get to the ferry terminal. The majority of respondents (almost 60 percent) indicated that the sole reason for their trip away from home was to visit Langkawi Island. Only 8 respondents were visiting other places as their primary destination with Langkawi a stop-over on those trips. Only one of the visitors coming to the island was on his/her way to Thailand. The others were visiting Payar, a nearby island-destination that is well-known for snorkeling. Clearly, Langkawi was the primary destination for the majority of visitors.

The most cited reasons for visiting the island were for 'touring and general sightseeing' (46.7 percent), followed by 'business only' (28 percent), 'shopping' (26.9 percent), 'mixed business and pleasure trips' (18.1%) and 'visiting family and friends' (14.9%). In contrast, the Tourism Malaysia survey determined that almost half of domestic tourists traveled for the main purpose of visiting family and friends. The 1998 study's findings also showed that only about 1 percent of the tourists cited shopping as an important purpose of their trip to domestic destinations. The present study, therefore, suggested the importance of Langkawi as a shopping destination among the domestic tourists.

Table 4
Trip characteristics

	Percentage	1998 Tourism Malaysia's study (percentage)
Main Transportation (n=754)		
Car	67.1	72.5
Motorcycle	2.7	n/a
Chartered Bus	6.2	5.6
Taxi	10.5	3.2
Public (Schedule) Bus	12.6	6.9
Train	0.9	0.8
Reason for trip		
Visiting Langkawi Only	59.9	n/a
Reasons for visiting Langkawi *		
Visiting Family & Friend	14.9	47.3
General sightseeing/touring	46.7	35.7
Business (work only) trip	28.0	1.0
Business with pleasure	18.1	3.7
Shopping	26.9	1.4
Educational trip	8.2	3.0
Others	5.9	n/a
Number of Night for Trip (n=754)		
Day-trippers	9.2	n/a
Overnight Visitors +		
1 night	25.2 (*24.0*)	n/a
2 nights	34.1 (*32.8*)	n/a
3 nights	17.8 (*17.2*)	n/a
4 nights	8.2 (*5.6*)	n/a
5 or more nights	8.6 (*7.8*)	n/a
Accommodation on Langkawi (n=754)		
Hotel / Motel	52.5	22.0
Campground	4.7	1.7
Chalet	10.9	7.7
Vacation Resort	8.0	n/a
Family/Friend	18.3	56.9
Others	3.2	n/a

* indicates multiple response question
+ Nights planned on Langkawi shown in parentheses

Almost 91% of the respondents stayed at least one night away from home while on their trip to Langkawi Island. These were considered 'overnight' visitors. Only about 9 percent were 'day-trippers' or did not plan to spend any nights away from home. The overnight visitors spent an average of two nights away from home, which included traveling to and from the island. Most overnight visitors (74%) planned to spend between one to three nights on the island. Only about 8 percent of them planned to spend five or more nights on Langkawi. Comparable information on the length of trips was not available from the 1998's study.

More than half of the overnight visitors (52.6%) to the island planned to lodge in hotels or motels. By comparison, the study conducted by Tourism Malaysia (1999) found that the majority of domestic visitors (56.9 percent) stayed with family, friends, or relatives on overnight trips. Clearly, this is because Langkawi is an island-destination. Without any family ties or friends on the island, visitors may have had no other option but to stay in hotels or other types of commercial lodging while visiting the island. Chalets were the next most often used type of lodging by guests visiting the island. Chalets are generally operated by private, small, and locally owned enterprises. Observations during the surveys disclosed that most chalet companies employed representatives who were active and visible at the ferry terminal trying to entice visitors to their businesses. Chalet operators also offer competitive prices to attract visitors.

Nearly 27 percent of the visitors traveled alone to the island (Table 5). Nineteen percent traveled in large groups, which consisted of more than five persons. Travel parties to the island averaged nine persons compared to five persons as reported in the 1998 Tourism Malaysia study. Travel parties to Langkawi were divided into two groups:

those with and without children. In the present study, children are defined as persons 13 years old or younger. Almost 78 percent of the parties did not include a child. Most of the other parties included one or two children.

Most respondents anticipated that they would participate in about three different activities while on the island. Most of the respondents planned to sightsee (66.4 %). Also, given Langkawi's status as a 'duty-free zone,' it comes as no surprise that a majority of visitors (61.8 %) were planning to shop during their trips. Other popular activities included ocean swimming (35.9 %), visiting theme parks (25.2 %), and photography (23.7 %). Other activities that are heavily promoted are less popular among the visitors, including attending special events and festivals (10.2 %), scuba diving (9.5%), boating (4.9%), and golfing (3.4%). About 12 percent of the visitors had no plans to participate in any of the activities listed on the questionnaire.

The person in the travel parties who made the decision to visit Langkawi is also reported in Table 5 along with similar findings on domestic travel collected in the 1998 study. Most of the respondents (almost 39 %) made the decisions themselves, and for about 21 percent of the parties, the travel decision was jointly made with their spouse. Approximately 11 percent of the respondents were visiting the island on trips arranged by their employers. Usually, they were those who worked for private companies, such as factories that provide group travels as some sort of job incentive.

Table 5
Trip characteristics (continued)

	Percentage	1998 survey (percentage)
# of Person in Travel Party (n=754)		
Travel Alone	27.2	n/a
1 person	11.0	n/a
2 persons	13.5	n/a
3 persons	11.4	n/a
4 persons	11.4	n/a
5 persons	6.5	n/a
More than 5 persons	19.0	n/a
# of Children in Travel Party (n=754)		
None	77.7	n/a
1 to 2	16.5	n/a
3 to 4	4.2	n/a
5 to 6	0.8	n/a
7 and more	0.8	n/a
Activity to Participate in*		
Sightseeing/ touring	66.4	n/a
Shopping	61.8	n/a
Swimming (sea)	35.9	n/a
Visiting theme park	25.2	n/a
Photography	23.7	n/a
Picnic	22.8	n/a
Visiting family or friends	15.0	n/a
Trip Decision Makers (n=754)		
Self	38.6	38.0
Jointly (with spouse/partner)	21.1	n/a
Spouse/ partner	7.6	11.5
Employer	11.5	7.2
Travel agents	4.2	0.5
Family/ friends	11.0	7.7
Others	5.9	n/a

* indicates multiple response question

Recently, the Malaysian government has voiced dissatisfaction with the number

of Malaysians who utilize the services of travel agencies for domestic trips (Malaysian

Government, 2000). The low level of use of travel agents is verified by this study. Only

about 4 percent consulted travel agents for information or arrangements on places to

visit on Langkawi compared to less than 1% for all domestic travel. trips. The low usage

of travel agents by domestic visitors continues even though there have been annual

campaigns since 1999 to encourage more planned holidays by Malaysians (Tourism

Malaysia, 2002).

Travel Behavior of Domestic Visitors to Langkawi Island

This section provides information on the travel behavior of visitors to Langkawi,

including the number of pleasure trips (to other destinations) during the 12 months prior

to their trips to Langkawi, and the destinations and types of attractions visited on these

trips. This information is presented in Table 6. Almost half (47.9 percent) of the

domestic visitors to Langkawi had not taken any pleasure trips during the 12 months prior

to their visit to Langkawi. About a third (32 percent) had taken at least one pleasure trip.

The majority of these (71%) had been on one to three trips during the period. Most of

these trips were to domestic destinations; only about 28 percent of the trips were made

internationally. In part this may be due to the efforts of the Malaysian government to

promote domestic attractions since the economic slowdown. Promotional campaigns such

as 'Malaysia My Destination', 'Colors of Malaysia', and 'Short Breaks Malaysia' were

launched to foster domestic travel (Idrose, 2000).

Table 6
Travel behavior of domestic visitors on Langkawi Island

	Number of Responses	Percentage
Pleasure trip in the previous 12 months (n=754)		
No trips	512	67.9
Made at least one trip	242	32.1
Number of Trips (n=242)		
1	47	19.4
2	77	31.8
3	47	19.4
4	21	8.7
5	21	8.7
6+	29	12.0
Pleasure trip destinations * (n=242)		
International	68	28.1
Domestic	235	97.1
Attractions visited on pleasure trips (n=242) +		
Historical Attractions	190	78.5
Shopping Complexes	220	90.9
Beaches	199	82.2
Theme Parks	116	47.9
Sports and Special Events	63	26.0
Nature and Outdoor	107	44.2
Agriculture Tourism	83	11.0
Holiday Resorts	166	68.6

* Multiple response (respondents may indicate both destination types).

+ Only 'yes' percentages are reported.

Additionally, those who had taken at least one pleasure trip in the 12 months prior to visiting Langkawi were also asked about the types of attractions visited. Shopping complexes were the most popular attraction on their trips; almost 91% who visited had gone to a shopping area as a pleasure trip. Other popular activities or attractions included

beaches (82%), historical attractions (79%) and holiday resorts (69%). Coincidently,

these were also considered to be the most popular attractions on Langkawi Island.

Attractiveness of Langkawi Island

As presented in the previous chapter, the adapted 'Destination Attractiveness

Model' can be expressed by using the following formula:

$$T_i = a_i = \sum_{k=1}^{n} B_{ik} E_k$$

Where:

T_i	=	Attractiveness of a destination (*Attractiveness*)
a_i	=	A unidimensional measure of respondent $_i$'s attitude toward the destination
B_{ik}	=	The strength of respondents $_i$'s belief that attraction type $_k$ is available at the destination (*Belief*)
E_{ik}	=	The degree of importance that individual $_i$ assigns to attraction type $_k$ (*Importance*)
n	=	The number of different types of attractions

A four step process was employed to determine the attractiveness of Langkawi

Island. First, surveyed respondents were asked to indicate the relative importance of eight

different types of attractions in their decision to visit the island. This data produced the

E_{ik} scores for the model. Then they were asked about their beliefs/perceptions of the

availability (supply) of the eight attraction types on the island. This provided the B_{ik}

scores. The importance and availability was measured using a 5-point Likert-like scale

ranging from 0 to 4.

Tables 7 and 8 present the importance and belief scores for each of the eight

attraction types, respectively. As shown on Table 7, Langkawi is perceived as providing

many different tourism attractions, most notably beach attractions. Most domestic visitors perceive that the island has a range of attractions, not just offering one type of attraction. They perceive that beaches, historical attractions, and resorts are the most abundant attractions on the island. For example, about 85 percent of the domestic visitors believe that there are many beach attractions on Langkawi. Only a relatively few visitors perceive that beach attractions are not widely available on the island. Themes parks, agricultural tourism, and sports and special events are not perceived as being as abundant. Interestingly, despite being frequently organized and offered, many respondents (21.8 percent) still perceived special events and sports as not widely available on the island. Also, even though the island has a national reputation as a shopping destination, about 10% of domestic tourists believe that the island does not offer a great deal of shopping opportunities.

Table 7

Domestic visitors' beliefs on the availability of eight types of attractions
on Langkawi Island

Types of Attractions	Frequency and percentages					
	0 None Available	1	2	3	4 Much Available	Mean
Historical Attractions	6 (0.8)[1]	28 (3.7)[1]	114 (15.1)[1]	265 (35.1)[1]	341 (45.2)[1]	3.20
Shopping Complexes	17 (2.3)[1]	52 (6.9)[1]	173 (22.9)[1]	288 (38.2)[1]	224 (29.7)[1]	2.86
Beaches	3 (0.4)[1]	16 (2.1)[1]	96 (12.7)[1]	276 (36.6)[1]	363 (48.1)[1]	3.30
Theme Parks	35 (4.6)[1]	94 (12.5)[1]	246 (32.6)[1]	293 (38.9)[1]	86 (11.4)[1]	2.40
Sports and Special Events	39 (5.2)[1]	125 (16.6)[1]	273 (36.2)[1]	237 (31.4)[1]	80 (10.6)[1]	2.26
Nature and Outdoor	15 (2.0)[1]	74 (9.8)[1]	224 (29.7)[1]	277 (36.7)[1]	164 (21.8)[1]	2.66
Agriculture Tourism	20 (2.7)[1]	111 (14.7)[1]	244 (32.4)[1]	260 (34.5)[1]	119 (15.9)[1]	2.26
Holiday Resorts	6 (0.8)[1]	20 (2.7)[1]	113 (15.0)[1]	293 (38.9)[1]	322 (42.7)[1]	3.20

Note:
[1] Percentages of each score on belief scale
Scale: None available (0) to Many/Much Available (4)

Table 8 reports the importance that domestic visitors assigned the eight attraction types in their decisions to visit Langkawi. The table reveals that domestic visitors came to the island for a variety of reasons and that a sizeable proportion consider all of the

attraction types to be important reasons for visiting. Beaches, historical attractions, and holiday resorts were the three most important types of attractions in visitors' decision to visit Langkawi. As already discussed, most respondents considered beach attractions to be the most important reason for visiting the island. They assigned it a mean importance score of 2.99 (on a four point scale with 4 being most important) for the attraction type. About 71 percent considered the beach as either important or very important in their visit. Historical attractions (mean=2.97) and holiday resorts (mean=2.69) were the next most important types of attractions. These were rated highly (important or very important) by about 67 percent and 59 percent of the visitors, respectively. The study also found that sports and special events were perceived as the least important factor (mean =2.04) in their decision to travel to Langkawi Island.

Table 8

Importance ratings domestic visitors assigned to eight types of attractions
in their decisions to visit Langkawi Island

Types of Attractions	Frequency and percentages of each score on Importance Scale					Mean
	0 Not Important	1	2	3	4 Extremely Important	
Historical Attractions	20 (14.7)[1]	38 (5.0)[1]	186 (24.7)[1]	210 (27.4)[1]	300 (39.8)[1]	2.97
Shopping Complexes	40 (5.3)[1]	57 (7.6)[1]	201 (26.7)[1]	238 (31.6)[1]	218 (28.9)[1]	2.71
Beaches	19 (2.5)[1]	36 (4.8)[1]	164 (21.8)[1]	247 (32.8)[1]	288 (38.2)[1]	2.99
Theme Parks	54 (7.2)[1]	121 (16.0)[1]	255 (33.8)[1]	220 (29.2)[1]	104 (13.8)[1]	2.26
Sports and Special Events	89 (11.8)[1]	141 (18.7)[1]	275 (36.5)[1]	150 (19.9)[1]	99 (13.1)[1]	2.04
Nature and Outdoor	43 (5.7)[1]	105 (13.9)[1]	209 (27.7)[1]	197 (26.1)[1]	200 (26.5)[1]	2.54
Agriculture Tourism	55 (7.3)[1]	143 (19.0)[1]	240 (31.8)[1]	196 (26.0)[1]	120 (15.9)[1]	2.24
Holiday Resorts	39 (5.2)[1]	95 (12.6)[1]	178 (23.6)[1]	190 (25.2)[1]	252 (33.4)[1]	2.69

Note:
[1] Percentages of each score on importance scale
Scale: Not Important (0) to Extremely Important (4)

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The mean scores for both importance and belief scales are summarized and reported in a graph below. The graph shows that the belief scores (on the availability of attractions) as assigned by the domestic visitors are higher than the importance they assigned to each type of attraction. Some other details also emerge from the graph. For example, domestic visitors place more importance on beaches and believe that the island has more beaches than any of the other seven types of attractions. Sports and special events were considered to be the least important type of attraction in decisions to visit Langkawi. The greatest discrepancy between importance and perception of availability is for resorts.

Figure 3
Mean scores for importance and belief scales
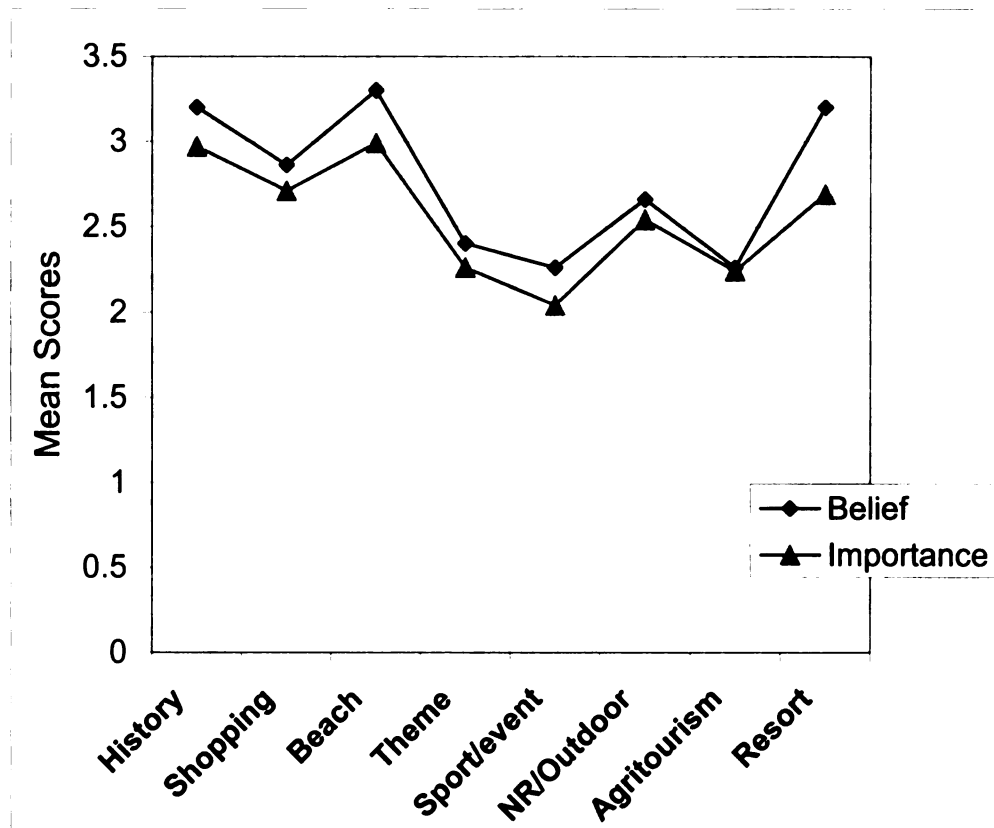
The tables and graph show that while visitors perceived some attractions as being abundant on the island, these attractions were not always important reasons for visiting Langkawi. Take holiday resorts for example. Many visitors felt that there were many resorts available on the island, but that they were not a very important reason for visiting. This may be due to the fact that holiday resorts on the island are perceived as too expensive for most domestic visitors. So, while the island is seen as having many resorts, most domestic visitors choose other types of accommodation while on the island. Therefore, holiday resorts were not a factor in their trip decision, hence the low importance score.

In order to better understand the relationship between the importance of various attractions types and visitor beliefs/perceptions of the availability of those attractions, scores from both scales were subjected to statistical tests. First, the importance scores/scale were recoded into two categories: a' high score' that included scores of either 3 or 4 on the importance scale. The 'low score' included 0 or 1 scores. Importance scores of 2 were disregarded because it was felt that these persons were indifferent toward that type of attraction. Domestic visitors that assigned either a high or low score to the different types of attractions were then compared by performing a series of t-tests on their beliefs/perceptions on the availability of various types of attractions (Table 9).

Table 9

Comparison of the beliefs on the availability of various
types of attractions on Langkawi Island by persons who consider
those types of attractions as either important or unimportant
when deciding to visit the island

Types of Attractions	Low Importance (0 and 1) n=131	High Importance (3 and 4) [1] n=274	t-value	Prob.
Historical Attractions	3.04[1]	3.42[1]	-4.220	.000*
Shopping Complexes	2.65[1]	3.12[1]	-4.505	.000*
Beaches	3.05[1]	3.47[1]	-4.733	.000*
Theme Parks	1.79[1]	2.74[1]	-8.974	.000*
Sports and Special Events	1.69[1]	2.64[1]	-9.223	.000*
Nature and Outdoor	2.23[1]	2.98[1]	-7.090	.000*
Agriculture Tourism	2.00[1]	2.87[1]	-8.349	.000*
Holiday Resorts	2.89[1]	3.41[1]	-5.609	.000*

[1] mean scores on belief scale
* a significant difference at the .05 level.

Table 9 shows that for all types of attractions, domestic visitors who considered a particular type of attraction as important or very important in their decision to visit the island believed that those attractions were widely available on the island. This is not surprising and possibly explains that, for example, persons who consider beaches to be important, believe or perceive that there are beaches available on the island. The t-test comparisons are all significant at a .05 confidence level.

Some other possible explanations for these findings may include the fact that persons who do not consider a type of attraction as being important are just unaware (and not interested in determining) of the availability of that type of attraction on the island. Conversely, visitors who consider a type of attraction to be important will spend more

effort in researching the availability of those attractions. It may also plausible that visitors are merely transferring familiar images of other island-destination to Langkawi. Typical and ideal images of an island-destination, such as beaches, sun, and sea may contribute to visitor perceptions that such attractions are highly available on the island.

Additional tests were performed to determine whether persons, who are not interested in a particular type of attraction, are more likely to believe/perceive that they are not available on the island. In other words, lack of interest in an attraction type results in perceptions of non-availability. Visitors' interests in historical attractions may provide an example of this assumption. To test this assumption, four 'interest' indicators for historical attractions were used to determine: (1) their previous experiences visiting historical attractions on Langkawi; (2) their stated intention to visit historical attractions while visiting Langkawi on the trip that they were surveyed; (3) their intention to visit or have visited Kuala Kedah Fort (a historical site close to the ferry terminal) while on the current trip; and (4) their previous visit to any historical sites on pleasure trips they made within the last 12 months. Chi-square tests were performed to determine the relationship between these four 'interest' indicators and their belief on the availability of historical attractions on the island. The results from chi-square tests are presented in Table 10.

Table 10

Chi-square tests of the relationship between visitors' interest in historical attractions and
their beliefs on the availability of historical attractions
on Langkawi Island

Indicators of interest in historical attractions	Low Belief Score	High Belief Score	Statistic
Visited historical attractions during previous trips to Langkawi			
No	81.2	62.8	$\chi^2 = 2.260$
Yes	18.8	37.2	P>.05
Plan to visit historical attractions on the island during current trip			
No	52.9	42.1	$\chi^2 = 1.553$
Yes	47.1	57.9	P>.05
Plan to visit Kuala Kedah Fort during current trip			
No	76.5	69.0	$\chi^2 = 8.509*$
Yes	23.5	31.0	P<.05
Visited historical attractions on pleasure trips made within the last 12 months			
No	50.0	20.5	$\chi^2 = 2.051$
Yes	5.0	79.5	P>.05

* a significant difference at the .05 level .

From the analyses, it was found that only one 'interest' indicator – plan to visit

Kuala Kedah Fort, showed significant differences (at .05 level) between the belief

categories. The lack of significance differences may be the result of 'cell sparseness'

problem; some cells of the cross-tabulation tables have less than 5 expected member

counts. However, the finding, in general, shows that visitors who have little or no interest

in historical attractions believe that such attraction types are not widely available on Langkawi Island, thus providing support for our assumption.

The third step in determining the attractiveness of Langkawi Island to domestic visitors involved a multiplicative procedure. The importance score of each attraction type for each respondent was multiplied by their belief or perception score. Eight multiplicative scores (B_{ik} . E_{ik}) were calculated for each respondent. The multiplicative scores were then added together creating one summative score for each respondent. This summative score $\Sigma(B_{ik}$. $E_k)$ is the overall attractiveness of Langkawi Island. How the overall attractiveness index is calculated is demonstrated for three respondents in Table 11. These scores were later used as the basis for segmentation analyses in this study.

The multiplicative attractiveness scores for the three respondents are 56, 56, and 46 respectively. The attractiveness scores of these three respondents indicated that they do not perceive the island to be a very attractive destination for different reasons. For example, Respondents # 1 and #2 have the same overall attractiveness scores, but the importance they assigned to the attractions and their perceptions of what attractions are available on the island are different in significant ways. In this case, Respondent #1, perceives the island as having most of the attractions (higher belief/perception scores) but did not place as much importance on the attractions in their decision to visit the island. Conversely, Respondent #2 was not as positive (low belief/perception scores) about the availability of different types of attractions, but the attractions were important in his or her decision to visit the island. Respondent #2 visits the island even though he/she perceived that the island does not offer many of such attractions. It could be argued that there is a potential that Respondent #2 may not be satisfied with his/her previous

experience on the island. However, the individual scores indicated that, it is more likely that he/she was visiting the island for one or two primary reasons (e.g., visiting holiday resorts) and was therefore, not as aware of the other attractions on the island. Or maybe he/she was more conservative in the scoring than Respondent #1. The summative scores provide an overall measure of attractiveness but it also hides important information about the perceptions and importance different respondents assigned to different types of attraction.

Table 11

Examples of how the multiplicative and attractiveness scores are calculated

Types of Attractions	Formulas	Respondents #		
		1	2	3
Historical Attractions	Q9 (E_{ik})	2	3	4
	Q10 (B_{ik})	4	1	4
	$E_{ik} \cdot B_{ik}$ *	8	3	16
Shopping Complexes	Q9 (E_{ik})	1	3	3
	Q10 (B_{ik})	4	2	1
	$E_{ik} \cdot B_{ik}$ *	4	6	3
Beaches	Q9 (E_{ik})	3	4	3
	Q10 (B_{ik})	4	3	3
	$E_{ik} \cdot B_{ik}$ *	12	12	9
Theme Parks	Q9 (E_{ik})	2	4	3
	Q10 (B_{ik})	4	1	1
	$E_{ik} \cdot B_{ik}$ *	8	4	3
Sports and Special Events	Q9 (E_{ik})	2	3	2
	Q10 (B_{ik})	3	1	1
	$E_{ik} \cdot B_{ik}$ *	6	3	2
Nature and Outdoor	Q9 (E_{ik})	2	3	3
	Q10 (B_{ik})	4	2	2
	$E_{ik} \cdot B_{ik}$ *	8	6	6
Agriculture Tourism	Q9 (E_{ik})	2	3	2
	Q10 (B_{ik})	4	2	2
	$E_{ik} \cdot B_{ik}$ *	8	6	4
Holiday Resorts	Q9 (E_{ik})	1	4	1
	Q10 (B_{ik})	2	4	3
	$E_{ik} \cdot B_{ik}$ *	2	6	4
Summative Score	$\Sigma \, E_{ik} B_{ik}$	56	56	46

* Multiplicative score; importance score multiplied by belief score

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The mean multiplicative scores (E_{ik} . B_{ik}) for each type of attraction are presented

in Table 12. Despite the low overall attractiveness score, the island was perceived by

domestic visitors as attractive, especially for its shoreline and beach attractions (mean

multiplicative scores of 10.14 (from a maximum 16 points), followed by the historical

attractions (9.87). Holiday resorts (mean=8.93) and shopping complexes (8.29) were also

perceived as determinants of Langkawi's attractiveness. This verifies earlier conclusions

on what makes the island attractive as a major destination for domestic visitors; these

attractions are also commonly associated with tourism experiences on the island (Din,

1990). While there is variation among different visitor segments in how they perceive

the attractiveness of the island, marketers and advertisers need to recognize that beaches

and historical attractions are key positioning and image dimensions. As discussed

previously, the island is seen as having many holiday resorts, but are not important to

many domestic visitors, possibly because they are out of their price range.

Table 12

Mean multiplicative attractiveness scores (E_{ik} . B_{ik}) of
various types of attractions on Langkawi Island

Types of Attractions	Min.	Max	Mean Multiplicative Scores
Historical Attractions	0	16	9.87
Shopping Complexes	0	16	8.29
Beaches	0	16	10.14
Theme Parks	0	16	5.85
Sports and Special Events	0	16	5.09
Nature and Outdoor	0	16	7.25
Agriculture Tourism	0	16	6.03
Holiday Resorts	0	16	8.93

Results of Research Hypotheses Testing

As discussed in chapter 3, five research hypotheses were formulated for

testing. The first four hypotheses were based on the components of the 'Destination

Attractiveness Model' . The final two hypotheses focused on evaluating the segmentation

results. Hypotheses 1 through 3 were tested using t-tests and Chi-square. Analysis of

Variance (ANOVA) was used to test the final two hypotheses.

Importance of Different Types of Attractions

The first research hypothesis was stated as:

Domestic visitors to Langkawi Island assign more importance to
historical attractions in their decision to visit the island than they do
to any other types of attractions.

Let us recall that survey respondents were asked to use a 5-point Likert-type

scale to indicate the importance they assigned to various types of attractions in their

decision to visit Langkawi Island. The more important the attraction type, the higher the

score. Seven paired t-tests were performed to determine statistical differences in the

importance assigned to different pairings of attractions.

The findings of the t-tests (Table 13) support the research hypothesis (at 95

percent confidence level) for most types of attractions. There is a significant difference in

the importance of historical attractions in decisions to visit the island compared to other

attractions, except for beaches. There is no statistical difference between the importance

assigned historical attractions and beaches. Domestic visitors generally considered the

island's historical attractions to be more important than other attractions including

shopping which is considered to be a mainstay of the island's attractiveness and image.

Table 13

Results of paired t-tests of the difference in the importance of
historical attractions and other types of attractions
in the decisions of domestic visitors to visit Langkawi Island

Attraction Type	Mean	t-value	df	Probability (one-tail)
Historical Attractions	2.97	5.69	753	.000*
Shopping Complexes	2.71			
Historical Attractions	2.97	- .53	753	.296
Beach Attractions	2.99			
Historical Attractions	2.97	16.42	753	.000*
Theme Parks	2.26			
Historical Attractions	2.97	20.35	753	.000*
Sports and Special Events	2.04			
Historical Attractions	2.97	8.84	753	.000*
Nature and Outdoor Recreation	2.54			
Historical Attractions	2.97	15.88	753	.000*
Agriculture-tourism	2.24			
Historical Attractions	2.97	5.91	753	.000*
Holiday Resorts	2.69			

* different at the .05 level of statistical significance
Scale: Not Important (0) to Extremely Important (4)

It is particularly interesting to find that the historical attractions were given higher

scores than shopping complexes. Despite being developed as a shopping haven for

visitors, data obtained revealed that the importance of historical attractions has

outweighed the importance of shopping attractions in visitor decision to visit Langkawi.

The relatively high scores on historical attractions, however, are in accordance with the

shift in tourism development policy of the state of Kedah as stated in the first chapter.

The findings may lend support to the policy and emphasize the critical importance of this attraction type in generating tourism money for the state. Such findings would be of interest, especially to LADA and other relevant state agencies, because this may represent the type of tourism development on the island they want to pursue in the future.

The Influence of Previous Experience

This section discusses the results of statistical analyses pertaining to the second and third research hypotheses. Each hypothesis was designed to examine the effect of previous experience on visitor attitudes. Specifically, the hypotheses were set to determine if the repeat visitors assigned more importance and attractiveness values than the first-time visitors.

A vast majority (60.2 percent) of respondents identified themselves as repeat visitors (Table 14). Only about 40 percent indicated that it was their first trip to Langkawi Island. Respondents, who stated that they had visited Langkawi before, were further asked to indicate the year they had first visited the island. The finding revealed that about 69 percent of visitors had taken their first trip to the island between the years of 1991 and 2000. This may reflect the early stage of tourism activities on the island when it was being heavily developed and promoted as the nation's new tourist destination. The majority of the respondents (26.8 percent) also stated that they had not visited Langkawi within the previous 12 months from the time they were surveyed. Others specified that they made between one (19.6 percent) to two (21.4 percent) trips to the island during the same period of time.

Table 14

Summary of visitors' previous experience to Langkawi Island

	Number of Responses	Percentage
Types of visitors (n=754)		
First-time visitor	300	39.8
Repeat visitor	454	60.2
Year First Visited (n=454)		
Prior to 1980	35	7.7
1981-1985	24	5.3
1986-1990	73	16.1
1991-1995	119	26.2
1996-2000	195	43.0
2001	8	1.8
Trips in the last 12 months* (n=454)		
0 (did not make any trip)	130	28.6
1 trip	89	19.6
2 trips	97	21.4
3 trips	49	10.8
4 trips	24	5.3
5 or more trips	65	14.3

* 12 months refer to time period between August 2000 until July 2001

Previous Experience on Importance Scores

Research hypothesis 2 was designed to determine the influence of respondents' previous experience on their importance scores of all types of attractions. Specifically, the research hypothesis tests the notion that:

> Repeat visitors assigned more importance values for all types of attraction on their decision to visit Langkawi than the first-time visitors.

An independent sample t-test (one-tail) was used to compare mean scores between the groups for the importance ratings. The previous experience variable was used as the grouping variable. Seven separate t-tests were applied (at 95 percent confidence level) on the mean scores of each type of attraction. Findings from the tests are summarized in Table 15. Significant differences between the groups were found for five types of attraction - - historical attractions, shopping, beach attractions, theme parks and sports and special event. However, the study discovered that the first-time visitors rated each of these attractions as carrying more importance than the repeat visitors in their travel decision. Therefore, the proposition stated in the third research hypothesis was not supported.

The higher importance scores by the first-time visitors may have been the result of their high expectation of what they hoped to experience on Langkawi. For example, historical attractions were rated highly by the respondents and this may have reflected their strong desire to consume tourism experience at such attractions more than any other types of attractions available on the island. Three of the attractions - historical, shopping and theme parks - may also have been considered to be unique attributes to the island and therefore have carried more weight in determining the decision to visit the destination.

Table 15

Summary of statistical comparisons (t-test) of importance
mean scores between first time and repeat visitors to Langkawi

Attraction Type	Group	N	Mean	t-value	df	Probability (one tail)
Historical	First-Time	300	3.10	- 2.78	752	.003*
	Repeat	454	2.89			
Shopping	First-Time	300	2.84	- 2.62	752	.005*
	Repeat	454	2.63			
Beach	First-Time	300	3.07	- 1.77	752	.004*
	Repeat	454	2.94			
Theme Park	First-Time	300	2.46	- 4.07	752	.000*
	Repeat	454	2.13			
Sport/Special Events	First-Time	300	2.13	- 1.74	752	.042*
	Repeat	454	1.98			
Nature / Recreation	First-Time	300	2.59	- 1.03	752	.151
	Repeat	454	2.50			
Agriculture Tourism	First-Time	300	2.27	- 0.46	752	.321
	Repeat	454	2.23			
Resorts	First-Time	300	2.76	- 1.22	752	.116
	Repeat	454	2.65			

* different at the .05 level of statistical significance

Previous Experience on the Attractiveness of Langkawi Island

The third hypothesis is stated as:

> <u>Repeat visitors assigned more attractiveness value than the first-time
> visitors to Langkawi Island and its various types of attractions.</u>

This hypothesis was derived to determine if the repeat visitors assigned a

higher attractiveness value to Langkawi as a tourism destination than the first-time

visitors. An independent sample t-test (one tail) was used to compare mean values for the

attractiveness of the island between the visitor groups. Once again, the previous

experience variable was used as the grouping variable. Findings of the t-test may be

found in table below.

Table 16

Summary of statistical comparisons (t-test) of the overall attractiveness
means scores between first time and repeat visitors

Variable	Group	N	Mean	Std. Deviation	t-value	df	Probability (one-tail)
ATTRACTIVENESS	First Time	300	63.79	22.26	- 2.23	752	.013*
	Repeat	454	59.89	24.38			

* different at the .05 level of statistical significance

The findings reveal a significant difference among the groups with regard to the

attractiveness scores . A one-tail t-test, applied to the overall attractiveness scores yielded

a value of - 2.23, which is significant at the .05 level. The findings, however, failed to

support the research hypothesis that the repeat visitors assigned more attractiveness value

than the first-time visitors for Langkawi Island. Instead, the first-time visitors were found

to rate the island higher (mean=63.79) than the repeat visitors (mean=59.89) for attractiveness.

One plausible explanation for this finding is that most of the first-time visitors may have rated (on the belief scale) all types of attractions according to their perceptions, which more often than not, did not reflect the reality (Gregory, 1992). Therefore, they may have had the inclination to rate it higher than the repeat visitors. The repeat visitors, in contrast, rated the various types of attractions according to a more realistic impression of what they had seen on the island before and this may have influenced their low belief scores for each type of attraction.

For repeat visitors to give low ratings to a destination in terms of its attractiveness may raise concerns for destination managers. One of the concerns is that this finding may suggest the general lack of satisfaction on previous tourism experiences among people in this group. However, it was not the intention of this study to investigate the underlying cause for such differences in ratings between the groups. Further work on satisfaction level and its pertinence to destination attractiveness is required in the future to validate this proposition.

Identification and Assessment of Market Segments

The final objective of this study was to determine whether or not domestic visitors to Langkawi Island could be grouped into substantial, exploitable and reachable market segments. While it is often possible to group tourists into segments based on various segmentation bases (e,g,, socio-economics, purchase volume, purchase behavior), it

frequently produces groups that cannot be sufficiently used in designing a marketing mix that can selectively attract and satisfy the individuals that comprise the groups. Therefore, this study identifies the domestic visitor segments to Langkawi based on their perceptions of various types of attractions on the island and the importance they assign to the attractions. Two research hypotheses (#4 and #5) were tested to assess the quality of the segments that were produced.

Hypothesis 4:   The segmentation based on the attractiveness scores produces
                  segments that are substantial in volume.

Segments are considered to be substantial if there are enough customers or sales potential to justify the expenditure for marketing efforts required to serve it (Myers, 1996). For the purpose of testing the hypothesis, the number of domestic visitors in the identified segments was used as a measure of substantiality.

Hypothesis 5 was formulated to determine whether the segments that were identified were exploitable and reachable from a marketing perspective. Segments that cannot be distinguished or selectively reached by using different combinations of marketing communication messages and media are not useful as a basis for marketing strategies (Kikuchi, 1986). The persons comprising market segments must have some distinguishing characteristics so that elements of a marketing mix, such as promotions that electively appeal to them, can be designed for and targeted at the segments. In this case the segments were compared to determine differences in their socio-demographic characteristics, trip characteristics, and travel behaviors.

Hypothesis 5:   Domestic visitors segments differ in terms of their socio-demographic characteristics, trip characteristics, and their travel behaviors.

Forming the Segments and Analysis

The summative scores $\Sigma(B_{ik} . E_k)$, or the overall attractiveness scores were used as the segmentation base of the domestic visitors to Langkawi Island. The formation of the scores was discussed earlier in this chapter. A non-hierarchical cluster analysis (K-means) was used to group domestic tourists to Langkawi Island into groups or potential market segments. This technique reassigns cases to clusters with the nearest centroid (Wedel and Kamakura, 2000). The K-means technique was used primarily due to the large sample size. The K-means method also is far more 'robust to outliers and the presence of irrelevant variables' (Wedel and Kamakura, 2000; p. 54). This software does not require substantial computer resources. It permits specification of the numbers of different clustering to be created. For the purpose of this study, a sequence of clustering containing 2,3,4,5, and 6 clusters was specified by the researcher, but the technique only produces one solution for each of the different clustering solutions (number of clusters) requested (Ipson, 1993).

Compared to hierarchical clustering method, one of the disadvantages of using K-means method is difficulty in determining the number of clusters to retain for further analysis. In order to select the number of clusters, two criteria for selecting cluster solutions, as mentioned by Mahoney (1979), Kikuchi (1986) and Wedel and Kamakura (2000) were used: substantiality of segment size, and 'interpretability' or the ability of clusters to allow subsequent analysis. The cluster centroids of each of the five different

clustering solutions was examined to determine which of the solutions produced the most meaningful clusters and potential market segments. The four and five cluster solutions produced some groups that were only slightly dissimilar and some were very small in terms of membership. The four cluster solution for example, produced one cluster comprised of only eight respondents. It was suggested by Ipson (1993) that the minimum size of segment should be economically practical to tailor a separate marketing mix for the segment. Conversely the two cluster solution groupings were very generic and the differences between the two clusters did not provide much direction for marketing. In this regard, it was judged by the researcher that the 3 cluster solution fits this description.

The three cluster solution produced notably different clusters of sufficient size. Cluster 1 comprises 9.8 percent of Langkawi's domestic visitors, Cluster 2 representing 83.1 percent and Cluster 3 represents 7.1 percent. If the Langkawi Development Authority (LADA) estimation of 1.28 million tourist arrived by ferry in 2000 is accurate, then Segment 1 represents 125,000 domestic visitors, 1.1 million visitors are in Segment 2, and 91,000 in Segment 3. The segmentation in this study, therefore, supports the research hypothesis stating that the sample did produce market segments that are substantial in volume potential.

Analysis of Variance (ANOVA) was employed to determine what significant differences exist between the clusters in terms of the importance they assign to various types of attractions, and their perceptions of availability of those attractions on the island. There were statistically significant difference ($p < .05$) for each type of attraction indicating that the three segments differ in importance ratings and perceptions. The mean perception/belief and importance scores (cluster centroids) for each of the segments

provided the basis for labeling and describing them. The results of ANOVA's to

determine statistical differences across the three segments can be found in Table 17.

Table 17

Segment labels based on significant differences in cluster centroids

Type of Attraction	Importance and Belief Scales	Segment #1	Segment #2	Segment #3	Prob.
Historical attraction	Importance	1.72	3.03	3.93	.000*
	Belief	2.76	3.20	3.87	.000*
Shopping	Importance	1.50	2.78	3.50	.000*
	Belief	2.35	2.87	3.49	.000*
Beach attraction	Importance	1.57	3.08	3.93	.000*
	Belief	2.80	3.31	3.87	.000*
Theme parks	Importance	0.93	2.32	3.49	.000*
	Belief	1.50	2.44	3.23	.000*
Sports and Events	Importance	0.74	2.08	3.36	.000*
	Belief	1.55	2.26	3.23	.000*
Nature / Recreation	Importance	1.01	2.61	3.87	.000*
	Belief	1.97	2.66	3.70	.000*
Agriculture tourism	Importance	0.85	2.28	3.79	.000*
	Belief	1.69	2.45	3.68	.000*
Resorts	Importance	1.12	2.77	3.93	.000*
	Belief	2.72	3.19	3.96	.000*

* Different at the .05 level of statistical significance
Importance: from 0=not important to 4=extremely important.
Belief: from 0=none available to 4= many/ much available.

Domestic visitors comprising Segment #3 placed more importance on all types of

attraction, but particularly higher on historical attractions (mean importance rating or

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3.93), beaches (mean importance rating =3.93) and holiday resorts (mean importance rating =3.93). Interestingly, Segment 3 members perceived that the island has a greater numbers of these three types of attractions than any of the other segments. Therefore, Segment 3 was labeled the 'Historical Vacationer' Segment. Members of Segment #2 placed significantly more importance on shopping (mean=2.78) and nature/outdoor recreation (mean=2.61), and also perceive that the island offers more in the way of these activities/attractions than the other segments. Hence, this segment was labeled the 'Recreational Traveler' Segment. Segment #1 proved to be hard to meaningfully labeled or named. This segment, however, comprises of visitors who placed less importance on all types of attractions and believe the island has less of all attractions than the other segments. This segment has been named the 'General Experience' Segment.

To develop a more robust and marketing supportive profile of each of the segments, they were statistically compared on socioeconomic, trip characteristics, and travel behavior variables ANOVA and Chi-square analyses were used depending on whether the variables were nominal or interval. One-way ANOVA tests were conducted to examine differences in average age, length of their trips to Langkawi, number of persons in their travel party to Langkawi, number of previous visits to Langkawi, number of pleasure trips taken (to other destinations) within the previous 12 months. Chi-square tests were employed to test for differences on categorical variables including: state of residency, purpose of trip, intention to visit (or not) historical attractions on the island, awareness of historical attractions on the island, first-time vs. repeat visitors, choice of accommodation, and types of trip (day-trip or overnight). The findings of the ANOVA tests can be found in Table 18 and the results of the Chi-square tests are in Table 19.

Table 18

Summary of statistical comparisons (ANOVA) of
Langkawi's three domestic visitor market segments

Variables	Segment	Number	Mean value	F-value	df	Prob.
Age	1.General Experience	74	31.49	.082	2	.922
	2.Recreational Traveler	627	31.54			
	3.Historical Vacationer	53	31.04			
Length of Trip	1.General Experience	74	1.70	4.699	2	.009*
	2.Recreational Traveler	627	2.38			
	3.Historical Vacationer	53	2.40			
Size of Travel Party	1.General Experience	74	3.11	2.516	2	.081
	2.Recreational Traveler	627	6.50			
	3.Historical Vacationer	53	10.96			
# of past Trip to Langkawi	1.General Experience	74	3.15	1.438	2	.239
	2.Recreational Traveler	627	2.34			
	3.Historical Vacationer	53	2.56			
# of past Pleasure Trip	1.General Experience	74	4.05	1.803	2	.167
	2.Recreational Traveler	627	3.05			
	3.Historical Vacationer	53	3.28			

* different at the .05 level of statistical significance

There are no statistically significant differences between the three segments in

terms of their age, size of travel party to Langkawi, the number of previous trips to

Langkawi, and the number of pleasure trips (to other destinations) within the previous 12

months. The only difference was the length of the trip which they were making to

Langkawi. Visitors in the General Experience Segment were found to make shorter trips

to the island. We must remember that they placed less importance on any of the types of

attractions and they also believed that Langkawi has fewer attractions than any of the

other segments. Most of the members in this segment were on day trips and they were also more likely going to the island for shopping and general sight seeing primarily. Conversely, 'Historical Vacationers Segment' perceived that the island has an abundance of the various attractions, and their enthusiasm was appropriately reflected by their intention to stay longer on Langkawi than visitors in the other two segments.

As recommended by Mahoney (1979), despite the lack of statistically significant differences (at .05 level), some of the patterns observed are worth noting as they contribute to a more complete profile of the segments. For example, the size of Historical Vacationer Segment's travel parties was larger than the other segments, although the difference is not statistically significant at a 95 % level of confidence. Additionally, visitors in the General Experience Segment traveled more than the other segments. They averaged four pleasure trips over the last twelve months compared to Historical Vacationers and Recreational Travelers segments who took an average of three trips. Their greater travel experience may also contribute to the lower ratings they gave to Langkawi's attractions compared to the other segments.

Chi-square tests on categorical variables including 'income', 'education level', 'employment', and 'ethnic groups' are reported in Table 19. Although socio-economic characteristics have been frequently criticized as producing weak or mixed results in discriminating between segments (Mahoney, 1979; van Raaij, 1986; Brayley, 1990; Court and Lupton, 1997), they can contribute to developing a profile that can help target media placement.

Table 19

Summary of statistical comparisons (Chi-Square) across
Langkawi's three domestic visitor market segments

Variables	Percentage Segment 1 (n= 74)	Percentage Segment 2 (n=627)	Percentage Segment 3 (n=53)	Statistic
State of Residency				
In-state	71.6	44.8	47.9	$\chi^2= 19.272*$
Out-of-state	28.4	55.2	52.1	$P<.05$
Purposes of Trip+				
VFR	25.7	13.4	17.0	$\chi^2=8.094*$
Sightseeing	16.2	50.9	39.6	$\chi^2=33.090*$
Business Trip	50.0	26.3	17.0	$\chi^2=21.848*$
Business/Pleasure	16.2	17.1	32.1	$\chi^2=7.632*$
Shopping	12.2	28.9	24.5	$\chi^2=9.555*$
Plan to visit historical site	60.0	66.9	69.2	$\chi^2=16.641*$
Aware of historical site [a]	70.0	82.4	84.2	$\chi^2=1.988$
Previous Experience				
Repeat visitor	73.0	58.4	64.2	$\chi^2=6.258*$
First-time visitor	27.0	41.6	35.8	$P<.05$
Choice of Accommodation				
Commercial lodging	63.0	83.0	86.3	$\chi^2=14.045*$
Family, friends	37.0	17.0	13.7	$P<.05$
Types of trips				
Day trip	27.0	7.5	3.8	$\chi^2=35.352*$
Overnight trip	73.0	92.5	96.2	$P<.05$

Note:

χ^2 Test of significance of differences in percentages

* = significant at p= .05

+=multiple-response question

[a] = This question was relevant only to those who were visiting Langkawi for the first time.

There are significant differences across the segments on their state of residency.

About 55.2 percent of the Recreational Travelers were out-of-state visitors compared to

just over a quarter (28.4%) of the General Experience Segment and 52.1 percent of Historical Vacationers. The fact that a higher percentage of the General Experience visitors was locals could also contribute to the lower importance they assigned to tourism attractions and also perceptions of the island's attractions. As already reported, most of the out-of-state visitors in all three segments came from the neighboring states of Penang, Selangor, Wilayah and Perak.

The three segments differ significantly in their purposes for the trips to Langkawi Island. In this study, purposes of trips to Langkawi was measured using a multi-response question which allows respondents to indicate multiple purposes for their trips. Therefore, for analysis purposes, dummy variable was created for each response. A score of '1' was given if a respondent indicated a particular trip purpose and '0' if a purpose was not selected. Differences across five trip purposes -- visiting family and friends (VFR), sightseeing, business trip, business with pleasure and shopping-- were tested.

More of the General Experience visitors (about 26 percent) were traveling to the island to visit family and friends. In comparison, just 13 percent of Recreational Travelers and about 17 percent of Historical Vacationers cited such a purpose for their trip to the island. More visitors in the Recreational Travelers segment were visiting Langkawi mainly for sightseeing (about 51 %) and shopping (28.9%) than visitors in the other two segments. Half of the General Experience visitors were on business trips to Langkawi; this purpose was cited the least among the Historical Vacationers (only 17%). This is perhaps because more Historical Vacationers (32.1%) were mixing business with pleasure while visiting the island.

The chi-square tests also revealed a statistically significant difference in intentions to visit historical sites while on the island. As might be expected, over two-thirds of Historical Vacationers planned to visit historical sites. Fewer members of the other two segments intended to visit such type of attraction. A significant difference was also identified with respect to the previous trip experiences of members of the three segments. Almost three quarters of General Experience were repeat visitors to Langkawi in contrast to just over half (58.4%) of Recreational Travelers. As mentioned in the previous paragraph, many General Experience visitors were visiting Langkawi for business purposes. Their frequent business trips to the island may account for the overwhelming number of repeat visitors in this segment.

The following classification of accommodations, as recommended by Gregory (1992) was used: (1) commercial lodging and, (2) staying with family or friends. Commercial accommodations included hotels or motels, chalets, campgrounds, and resorts. Of course, day-trippers were excluded from the analysis. The majority of all respondents (81.7 percent) planned to stay in commercial lodging facilities. Chi-square tests revealed some statistically significant differences between the segments in their choice of accommodations on the island. A high percentage (86%) of the Historical Vacationers planned to stay in commercial lodging. Interesting, a fairly high percentage (37 percent) of respondents in the General Experience segment indicated that they would rather stay at family or friends' houses than using the commercial services. Data in Table 22 shows that most of them are in-state visitor and had frequented the island in the past, mostly for business purposes. It is plausible to believe that members of this segment comprised mostly of those who are greatly familiar with the island or have family/friend

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ties on the island. Thus, they are more likely to spend nights at friend or family houses on the island.

The domestic tourists were asked how long they planned to spend away from home on their trip to Langkawi. The information was transformed into 'overnight' and 'daytrip' visitors. The vast majority of domestic tourists visiting the island (90.8%) were overnight trippers, spending a night or more on Langkawi and/or other places (en route to the island or on their way home). Again, there were statistically significant differences between segments on the type of their trips. About 96 percent of Historical Vacationers (of which 52% reside out-of-state) were on overnight trips compared to just 73% of the General Experience. This is mainly due to the fact that most visitors in the General Experience segment are traveling a rather short distance to Langkawi compared to others; about 76 percent of them are residing in the state of Kedah.

Tests for differences in the socio-economic characteristics of the members of the three segments are reported in Table 20. Because of cell sparseness the income variable was recoded into categorical data. Respondents with monthly household income of RM2,000 or less were categorized as 'low income', and those who earn more than RM2,000 were classified as 'high income' group. Other categorical characteristics (precisely education and employment) were also condensed into fewer categories. Education levels were re-grouped into 2 categories: a 'low education level' that included persons with primary and secondary levels of education and a 'high level' of education which included persons who were classified as college or university graduates. The original eight employment categories were reduced to two – 'full-time' and 'other' employment situations. Business owners were considered full-time employees. The

'other' category included part-time employees, students, retired persons, and homemakers.

Table 20

Summary of statistical comparisons (Chi-Square) for socioeconomic characteristics across Langkawi's three domestic visitor market segments

Variables	Percentage Segment 1 (n= 74)	Percentage Segment 2 (n=627)	Percentage Segment 3 (n=53)	Statistic
Education Level				
Low Level	62.2	60.3	60.4	$\chi^2 = 0.098$
High Level	37.8	39.7	39.6	P>.05
Income Level				
Low Income	55.4	53.7	50.9	$\chi^2 = 0.249$
High Income	44.6	46.3	49.1	P>.05
Employment Category				
Full-time	91.9	82.9	81.1	$\chi^2 = 4.163$
Other	8.1	17.1	18.9	P>.05
Ethnic Group				
Malay	78.4	67.0	77.4	$\chi^2 = 6.376$
Chinese	13.5	22.0	15.1	P>.05
Indian	8.1	10.5	7.5	

Note:
χ^2 Test of significance of differences in percentages

Table 20 shows that there are no statistically significant differences in educational level, income, employment status, and ethnicity between segments. Therefore, socio-economic variables alone do not provide meaningful differentiation between segments or to design target marketing. However, when combined with other variables they provide a more complete understanding of the three segments.

In summary, the segments differed on 7 of the 17 variables that were tested and none of the socio-economic characteristics. There are potentially exploitable differences across the segments in their length of trips, state of residency, purpose of trips, intentions to visit historical attractions, previous trips to the island, types of trips, and choice of accommodation. Figure 4 can aid in understanding the segments. The graph shows the distributional pattern of the attractiveness scores. The distribution of attractiveness scores follow almost a normal curve. This normal distribution in someway hinders clear grouping of respondents based on the attractiveness data.

Figure 4
Distribution of the overall attractiveness
scores

Std. Dev = 23.62
Mean = 61.4
N = 754.00

Attractiveness scores
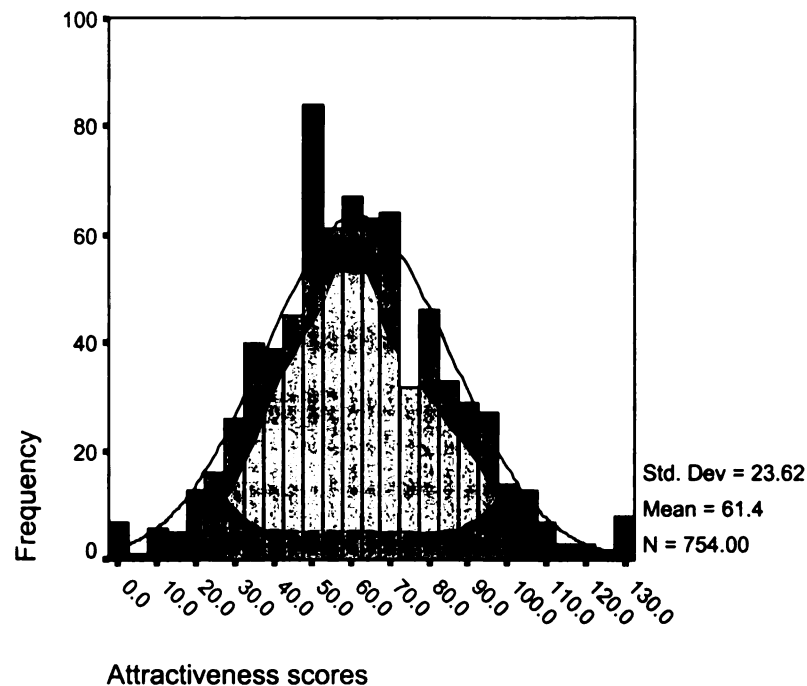
Alternative Segmentation Analysis

The segmentation analysis described above was carried out using overall attractiveness values assigned by all visitors including those business visitors. Some concerns surfaced during the data analysis stage that the inclusion of business visitors in the analyses might distort the true characteristics of visitor market on the island, particularly with regard to attitudes toward the island as a tourist destination. It was felt that business visitors would have different motivations for their visits and as a result, could assign different degrees of importance to various attractions than tourists. To examine this possibility, respondents were classified into 'business visitors' and 'non-business visitors' to the purpose of their trips to Langkawi and then compared on a number of different characteristics. The findings of these comparisons are shown in Table C1 and C2 (Appendix C).

In general, the 'business only' visitors to Langkawi Island can be described as follows: most of them are repeat visitors and had traveled to the island more than 3 times in the previous 12 months; they were most likely to travel by themselves and did not spend any during the trip; most of them were also interested in shopping and participating in touring and sightseeing while on their trips to Langkawi. Many business visitors to the island are residents of Kedah. Because of the short duration of their trips , they were less likely to stay overnight on the island. Their frequent trips to the island and familiarity with its attractions perhaps, leads to the lower attractiveness values they assigned to Langkawi Island as compared to values assigned by the 'non-business' visitors. They are less concerned with many of the attractions that are of interest to tourists and vacationers. Briefly, the findings lead us to conclude that there are differences in characteristics and

attitude toward Langkawi between the business visitor and the rest of domestic visitors on the island.

There findings tend to substantiate concerns that including 'business only' visitors might dilute the attractiveness values assigned by visitors and as a result the segmentation analyses. A similar K-mean cluster analysis was performed but this time, 'business only' visitors were excluded from the analysis. Interestingly, the segmentation analyses (Table D1; Appendix D) produced three segments that are very similar to the segments derived when 'business only' visitors were included.

Additional concerns were raised concerning the decision to base the segmentation on the overall (summative) attractiveness score versus segmenting on the attractiveness (importance and perceptions) of different attraction types. While the summative scores provides an overall measure of attractiveness, it was felt that it might also hide marketing relevant such as the differences in the perceptions and importance respondents assign to different types of attraction.

To address this concern, another segmentation analysis was conducted using the multiplicative scores $(B_{ik} . E_k)$ for each type of attraction as the segmentation base. The multiplicative scores are, in essence, an indication of the attractiveness of each type of attraction on the island to the domestic visitors rather than the island's overall attractiveness.

Again, a non-hierarchical cluster analysis (K-means) was used to identify the visitor segments. 'Business only' visitors were dropped from the segmentation process. In addition, further examination of the multiplicative scores, determined that the scores for agriculture tourism attractions and sports and special events were consistently lower

than for other types of attractions on Langkawi. Also, there was very little variation in the

multiplicative scores for these two attraction types across visitors. Consequently, scores

for these two types of attractions were also eliminated form the segmentation analyses.

A sequence of clustering containing 2,3,4,5, and 6 clusters was specified, and

each of the clustering results were examined. The cluster centroids of each of the five

different clustering solutions was examined to determine which of the solutions produced

the most meaningful clusters and potentially exploitable market segments. Substantiality

of the segments, and 'interpretability' were used in determining the number of cluster

solutions for further analyses. It was determined that the four-cluster solution best met the

criteria and the four segments were compared and contrasted on a number of different

characteristics in an effort to generate marketing important profiles.

The four-cluster solution produced notably different clusters of sufficient size.

Cluster 1 comprises 17.3 percent of Langkawi's domestic visitors, 24.5 percent of visitors

are in Cluster 2, 36.6 percent in Cluster 3, and 21.5 percent are in Cluster 4.   Applying

the estimated visitor arrivals via ferry in 2000, it is estimated that Segment 1 contains

28,160 domestic visitors, about 728, 320 visitors are in Segment 2, Segment 3 contains

456,960 visitors and 66,560 visitors are included in Segment 4.

Analysis of Variance (ANOVA) was employed to identify significant differences

between the clusters/segments in terms of the multiplicative scores they assigned to

various types of attractions on the island. The perception/belief and importance scores

(cluster centroids) for each of the segments provided the basis for labeling and

describing the four clusters/segments. The results of ANOVA's are reported in Table 21.

Chi-square and ANOVA test were carried out to identify meaningful differences across

segments on several variables including socio-demographic, trip characteristics and travel behavior. The findings from these analyses are also shown in Table 21. The combination of the analyses are summarized in the following profiles:

Segment 1:   This segment assigns high attractiveness scores to historical attractions, shopping, beach, and resorts. A large number of out-of-state visitors, many of them visiting the island for the first time are in this segment. Shopping, visiting theme parks, and visiting family and friends are the most preferred activities on the island. They are also very interested in visiting historical attraction on the island, and many had visited such attractions at other destinations they visit. Most of them are overnight trippers, and accordingly planned to spend more nights on the island . They prefer to stay in commercial lodging, although they are dominated by middle-income persons and younger in age compared to the other segments. This segment is labeled as 'Vacation Travelers'.

Segment 2:   Their attractiveness scores are lower for all types of attractions. Most of them are in-state visitors, residing in the state of Kedah. Their preferred activities on the island are shopping and visiting family and friends. This segment includes a large number of persons who have visited the island frequently.. Generally they have little interest in visiting historical attraction on the island. Most are on short trips to the island, and overnight visitors stay with family or friends.. They are older with lower incomes. This is labeled the 'In-state' or 'Local' segment because their residency explains many of their characteristics.

Segment 3:   This segment in centrist in that its members assign average attractiveness scores to all types of attractions except shopping and beaches. Most first time visitors can be found in this segment. Shopping and visiting theme parks are two most preferred activities while on the trip. Most of this segment are out-of-state visitors who frequently stay in commercial lodging when staying overnight on the island. 'First-time Visitors' is the label given to this segment.

Segment 4:   This segment is interested in all types of attractions and this is reflected in the higher than average attractiveness scores they assign to each of the attraction types, especially historical attractions, outdoor recreation activities and resorts. They are more likely to kayak, hike and scuba dive while visiting the island. Also, they are less interested in shopping on the island. Perhaps, this is due to the fact that members of this segment are younger than the other segments. They are also interested in historical places on the island. Many are repeat visitors, who on average stay longer on the island than other

segments. They prefer commercial lodging, perhaps because many of them are in the higher income brackets. Therefore, this segment is called as the 'Active Recreation' segment.

This segmentation does not seem to provide much different information from that previously offered by the first (overall attractiveness) segmentation process. Some characteristics of the new segments mirrored the characteristics previously identified in the original segments. This is in spite of the fact that steps were taken in removing 'irrelevant' variables from the segmentation analyses. Recall that this second alternative segmentation, which is based on the multiplicative scores, excluded the business visitors from the analyses. In addition, the scores for agriculture tourism attractions and sports and special events were dropped in forming and identifying the segments.

In summary, the segments differed on several variables that were tested; none are socio-economic characteristics. There are potentially exploitable differences in intentions to visit historical attractions, previous visit to historical site at other destination, historical sites visited on previous trip to the island, previous experience (repeat versus first time) on the island, types of trips, and some activities to participate in. Discussion on similarities between segments identified from both original (attractiveness) and multiplicative segmentation approaches are provided in the next chapter.

Table 21

Statistical comparisons between multiplicative score segments

Variables	Segment 1 (n= 94)	Segment 2 (n=133)	Segment 3 (n=199)	Segment 4 (n=117)	Statistic
Multiplicative Scores [a]					
Historical Attraction	11.71	5.50	11.52	12.01	F=79.403*
Shopping	11.52	4.88	11.68	5.47	F=149.073*
Beach	9.82	7.26	12.90	11.62	F=63.415*
Theme Parks	3.76	3.39	8.55	6.99	F=85.913*
Nature/recreation	5.43	5.20	7.46	13.03	F=106.402*
Holiday Resorts	12.07	5.73	8.92	11.83	F=61.139*
Socio-demographics					
Age [a]	31.02	30.33	31.65	29.42	F=1.829
State of Origin					
Kedahan	36.2	48.1	39.7	42.7	χ^2= 3.812
Out of state	63.8	51.9	60.3	57.3	P>.05
Income group					
<2000	52.1	55.6	53.3	55.5	χ^2= 87.811
2001-4000	40.4	36.1	40.7	32.5	P>0.05
4001-6000	6.4	3.8	4.5	6.4	
>6000	1.1	4.5	1.5	2.6	
Trip Characteristics					
Total night (island) [a]	2.17	1.98	2.16	2.16	F=0.704
Total length of trip [a]	2.43	2.16	2.31	2.47	F=941
Number of previous trip to Langkawi [a]	2.28	1.83	1.80	2.54	F=1.208
Plan to visit historical sites on Langkawi Island	67.0	57.9	73.4	65.8	χ^2=8.685*
Visited historical sites during last trip to Langkawi island	31.6	22.5	42.5	45.9	χ^2=11.611*
Visited other historical sites	87.5	60.0	78.3	79.5	χ^2=8.413*
Previous Visit to LI					
Repeat	60.6	60.2	43.7	63.2	χ^2= 16.071*
First Time	39.4	39.8	56.3	36.8	P<.05
Type of visit					
Day trip	1.1	9.8	3.0	2.6	χ^2= 13.927*
Overnight	98.9	90.2	97.0	97.4	P<.05

Table 21

Statistical comparisons between multiplicative score segments (continued)

Variables	Segment 1 (n= 94)	Segment 2 (n=133)	Segment 3 (n=199)	Segment 4 (n=117)	Statistic
Choice of lodging					
Family/relative	16.3	21.7	16.7	18.6	χ^2= 1.506
Commercial	83.7	78.3	83.3	81.4	P>.05
Activity to participate					
Shopping +	78.7	57.9	77.4	45.3	χ^2= 44.471*
VFR+	16.0	23.3	14.6	16.2	χ^2= 4.598
Visit Theme+	24.5	12.0	41.7	35.0	χ^2= 36.216*
Scuba Diving+	8.5	8.3	14.1	19.7	χ^2= 9.152
Jungle Hiking +	2.1	9.8	10.1	14.5	χ^2= 9.936*
Kayaking +	5.3	10.5	12.1	18.8	χ^2= 9.995*

[a] ANOVA test; mean scores are reported

χ^2 Test of significance of differences in percentages

* = significant at p= .05

+=multiple-response question

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Chapter 5

SUMMARY, CONCLUSION, AND RECOMEMNDATIONS

The two primary purposes of this study were to assess the attractiveness of Langkawi Island as a destination for domestic visitors and to evaluate visitors' perceptions and the importance they assigned to various types of attractions as a means of segmenting the island's domestic visitor market. The first chapter provided the general background, problem statement, purposes, and significance of the study. A description of Langkawi Island and tourism in Malaysia and specifically on the island were also provided in the chapter.

Chapter Two presented a review of literature related to the concept of destination attractiveness, multi-attribute attitude models, the relationship of previous visit experiences in explaining and predicting tourist travel decisions, and different approaches to market segmentation employed in relation to tourism research.

Chapter Three described the research hypotheses and also methods employed for data collection and analysis stages of this study. Chapter Four reported the findings, including tests of research hypotheses, the socio-demographics, trip characteristics, and general travel behavior of the domestic visitors to Langkawi Island. It also discussed in detail, the overall attractiveness evaluation of the island along with visitors' perceptions and the importance they assigned to various types of attractions on the island.

This final chapter is divided into four sections. The first section summarizes the major research findings relevant to the research objectives. Conclusions based on the research findings are presented in the second section. The third section discusses marketing and management implications of the findings to stakeholders of the tourism

industry on the island such as LADA, Tourism Malaysia, Kedah's state government, and attractions operators and event organizers. The fourth and last section addresses some of the study's limitations and suggests future research directions.

Summary of Key Research Findings

Findings from this study reveal that domestic visitors to Langkawi could be characterized as middle income, middle age, with high levels of education including many high school and college graduates. Most of the visitors that were interviewed were male and belonged to the Malay ethnic group. In-state visitors and near-to-home-visitors from the neighboring states of Penang, Perak, and Selangor constituted a significant proportion of domestic travelers interviewed. Most of the visitors were traveling from their home for the main purpose of visiting Langkawi Island. The majority planned to spend between one to three nights at commercial lodgings, such as hotels and motels on the island, while only a small fraction (less than 10 percent) of domestic visitors to Langkawi were day-trippers. A majority of visitors traveled to the island in relatively large parties, averaging nine persons.

Visitors did not perceive the Langkawi Island attractions as particularly unique in terms of type or amount of attractions. Visitors also appeared to miss many of the unique or distinct features that make it different from other island destinations. The findings suggest that domestic visitors largely perceived it as 'just another island-destination'. Visitor perceptions of Langkawi's attractiveness further revealed that beaches were the single most important type of attraction in determining its attractiveness. This was followed in descending order by holiday resorts, shopping

complexes, nature and outdoor recreation, agriculture tourism, theme parks, and finally special events and festivals. Suffice it to say, Langkawi has four key types of attractions that embody its current attractiveness: beaches, historical attractions, holiday resorts, and shopping complexes.

The first research objective was to assess visitor's perceptions of different types of attractions on Langkawi. The findings revealed a variety of different perceptions on the types of attractions available on the island. The island is primarily perceived as having many beaches, historical attractions, holiday resorts, and shopping complexes. Since the evaluation of visitor perceptions is essentially an evaluation of 'destination image' (Brayley, 1990), these four types of attractions may likely comprise the dominant image or positioning dimensions for current domestic visitors to Langkawi.

The second and third research objectives are essentially concerned with the importance of the various types of attractions, especially historical attractions, in visitors' decisions to travel to Langkawi Island. The findings reveal that beaches, historical attractions, holiday resorts, and shopping complexes are the most important in determining visitors' decisions to travel to Langkawi. Next to beaches, the island's historical attractions were the most important, suggesting that they are critically important to the marketability of the island.

The fourth and fifth research objectives focused on determining the roles of previous visit experience in determining the importance value domestic visitors assigned to the various types of attractions on the island and their perceptions of the overall attractiveness of the destination. Significant differences existed on perceptions of first-time and repeat visitors on five (out of eight) types of Langkawi's attractions – beaches,

historical attractions, shopping complexes, theme parks, and sports and special events.

These five types of attractions were perceived to be more important by the first-time

visitors in their decision to visit Langkawi than for repeat visitors. These attractions

appeared to carry more weigh in determining the first-time visitors' travel decisions.

Such information is important in designing marketing and advertising aimed at attracting

new visitors to the island.

The findings also revealed that first-time visitors had stronger perceptions of

Langkawi's overall attractiveness than did repeat visitors. Still, the island had a

significant number of repeat visitors during the time of the study. About 31 percent of all

visitors had been to Langkawi two or more times within the previous twelve months.

This apparent contradiction may in part be due to the role of intervening factors or

situational constraints such as time, money, distance, and lack of opportunity in

determining tourists' behavior (Backmann and Crompton, 1991). Distance, for example,

may prohibit visitors from traveling to destinations far from home and induce visits to

near-to-home destinations. About half of the respondents in the present study were in-

state visitors and therefore, may have corroborated Backman and Crompton's

proposition.

The final objective of this study was to segment domestic visitors to Langkawi

Island based on the importance they assigned to various types of attractions along with

their perceptions of the extent/availability of various types of attractions on the island.

The question was whether the segmentation would produce substantial, exploitable, and

reachable market segments. The segmentation produced three segments with substantial

volume potential: 'General Experience', 'Recreational Travelers' and 'Historical Vacationer'.

The exploitability and reachability of the segments was evaluated based on an examination of differences across segments on seventeen socio-demographics, trip characteristics and travel behavior variables. As revealed by the chi-square and ANOVA tests, statistically significant differences were found between the segments on state of residency, length of trips, purpose of trips, intentions to visit historical attractions, previous visit experiences, types of trips, and choice of accommodations. Other variables were not found to be significantly different across the segments.

The Recreational Traveler Segment is the largest of the three segments, comprising about 83 percent of the domestic visitor market to Langkawi. This segment is particularly interested in shopping and nature and outdoor recreation attractions in their decision to visit Langkawi. This segment, however, believes that Langkawi offers mostly beach attractions, historical sites, and holiday resorts for visitor enjoyment. This group visited the island mainly for the purpose of general sightseeing and shopping. Distance is perhaps, the most critical factor in defining the profile of this group. Most of them come from out-of-state. Accordingly, they planned to spend more than two nights away from home during their trip to Langkawi. Moreover, compared to the others, most visitors in this segment came to Langkawi for the first time, which lessened their familiarity with attractions on the island. They, however, showed interest in visiting historical attractions on Langkawi. The majority of visitors in this segment are of Chinese descent and possess higher levels of education than other visitors.

The General Experience Segment is the second largest group comprising 9.8 percent of Langkawi domestic visitors. This segment is comprised of visitors who do not consider any of the attractions as really mattering in their decision to visit Langkawi. They also, for reasons that were speculated and discussed in Chapter Four, believe the island has less of all types of attractions. The segment is also characterized by visitors who are on short trips to the island, mostly because a large number of them are in-state visitors. As would be expected, members of this segment have visited Langkawi more frequently than visitors in the other two segments. Many of them were visiting the island for business purposes and/or to visit family and friends. Accordingly, compared to the other two segments, most of them preferred to stay in family or friends' houses than at commercial lodging. They mostly came in smaller travel groups and took more pleasure trips to both international and domestic destinations. Among the three segments, they showed the least amount of interest in visiting historical attractions on the island. This segment has the highest proportion of Malays.

The Historical Vacationer Segment is the smallest segment of visitors traveling to Langkawi Island. Members of this segment assign more importance to beaches, historical attractions, and holiday resorts for their visit to the island. This segment is characterized by visitors who believe that Langkawi has many holiday resorts, historical attractions, and beaches to offer. Many of them are out-of-state residents and are distinguished from other segments by their plan to spend the most nights away from home while on their trip to Langkawi. They were visiting the island mostly for sightseeing and/or mixing business with pleasure purposes. They also showed the intention of visiting historical sites while on the island, even though many of them had

been to Langkawi before. Commercial lodging was their preferred choice of accommodation, despite the fact that they spent more time on the trip compared to the other segments; this was, perhaps, because this segment contains a high proportion of higher income visitors.

Since some concerns were raised during the segmentation analyses of the effects of business visitors on the research outputs, alternative approaches for segmentation were introduced. The first alternative segmentation, by using the same attractiveness scores but excluding the business visitors, produced segments that closely resembled those originally identified in the initial segmentation analysis. A second segmentation was carried out based on the multiplicative scores of each type of attraction on the island, with the exception of agriculture tourism attraction and sports and special events. Business visitors were also excluded from the analysis. Profiles of the four identified segments, however, are also remarkably similar to the three segments in the original (overall attractiveness) segmentation . For example, it is reasonable to believe that one of the original segments (i.e., Recreational Travelers) was split up into two new segments – 'Vacation Travelers' and 'First-time Visitors' in the latter segmentation. Similarities (and differences) between the identified segments from both segmentation approaches are shown in Figure 5.

Figure 5
Similarities between segments from two segmentation approaches

Multiplicative Segmentation	**Segment Characteristics**		**Attractiveness Segmentation**

| | * Combined together, represents 53.9% of sample
* Assigned high scores on beach, historical, shopping, and resort attractions.
* Mostly out-of-state and first time visitors
* Showed interest on historical attractions
* Most preferred type of activity: shopping, and visiting theme arks | * The largest segment (83.1% of sample)

* Put high values on beach, historical, resorts attractions

* Mostly out-of-state and first time visitors
* Showed interest on historical attractions
* Visiting primarily for sightseeing and shopping | |

Segment 1 'Vacation Travelers'
Segment 3 'First-time Visitors'
→
Segment 2 'Recreational Traveler'

| | * Represents 24.5% of sample (second largest)

* Assigned low scores on all attractions
* Mostly in-state and repeat visitors
* Short stay on island (mostly with family, friends)
* Preferred type of activity: shopping, and visiting family/friend | * The second largest segment (9.1% of sample)
* Put low scores on all attractions
* Mostly in-state and repeat visitors
* Short stay on island (mostly with family, friends)
* Visiting for business and visiting family/friend | |

Segment 2 'In-state'
→
Segment 1 'General Experience'

| | * Rated all attractions high (especially historical, resorts and outdoor recreation)
* Mostly out-of-state visitors
* Stay the longest on island; preferably at commercial lodging
* Showed high interest in historical attractions
* Visitors with higher income | * Assigned high scores on all attractions (historical, beach, resorts)
* Mostly out-of-state visitors
* Stay the longest on island; preferably at commercial lodging
* Showed high interest in historical attractions
* Visitors with higher income | |

Segment 4 'Active recreation'
→
Segment 3 'Historical Vacationer'

Similarities (and minor differences) between segments identified from both segmentation approaches are noted. Recreational Travelers segment of the original segmentation were somehow divided into two new segments in the second segmentation. These new segments were labeled as 'Vacation Travelers' and 'First-time Visitors' mostly to reflect their lack of previous visit experience and familiarity with the destination. The General Experience is comparable to 'In-state' from the alternative segmentation. As indicated before, most of the characteristics of General Experience segment were tied to their state of residency. Finally, Historical Vacationer segment posses characteristics that were unmistakenly similar to 'Active Recreation' segment.

Research Conclusion

Overall, this destination attractiveness study is successful in achieving its stated objectives. It provides meaningful insights into the characteristics of the current domestic visitors market to the island. The results also indicate that the multi-attribute model, as originally recommended by Martin Fishbein, provides beneficial means of evaluation of the various types of attractions on Langkawi Island and their roles in determining the attractiveness of the destination. Beaches, historical attractions, holiday resorts, and shopping complexes were consistently ranked as the primary types of attractions on the island. It appears that these types of attractions are the competitive strength of Langkawi in the domestic tourism market.

In general, findings indicate that first-time visitors have higher expectations of their visit to Langkawi compared to repeat visitors. The first-time visitors considered five types of attractions - - historical attractions, shopping complexes, beach, theme parks, and

sports and special events - as very important to their visit to the island. For tourism planners and marketers, this information may be useful for targeting new and potential visitors. The first-time visitors also assigned higher attractiveness values to Langkawi than the repeat visitors. As a result, the study was able to conclude that previous visit experience on Langkawi does influence the perceived attractiveness and the importance visitors assign to various types of attractions on the island.

Despite the difficulties in findings factors that may clearly define characteristics of the domestic visitor segments, it is still too early to conclude that domestic visitors to Langkawi Island make up a homogeneous market. Such a conclusion may only create further misconception of the market and lead to difficulties in future assessment of tourism demand and enactment of effective marketing strategies. This may merely reflect the fact that the tourism industry on Langkawi, and in Malaysia in general, is still considered to be in its infancy stage by international and regional standards. Compared to other countries in the region, such as Indonesia and Thailand, most of the destinations and attractions in Malaysia are still in a developing mode, and, therefore, the domestic market has not been exposed to enough diverse types of attractions and tourism experiences. As a consequence, the domestic market may have been inadvertently 'conditioned' to act and behave in the same way with regard to its pleasure pursuits including traveling.

Despite the efforts to use different segmentation approaches, including eliminating business visitors from the analyses, the end results remain almost the same. The visitor segments that emerged from the second (multiplicative) segmentation analysis did not produce distinct characteristics from segments originally identified in the first

(attractiveness) segmentation. In other words, removing the business visitors from the data did not change the make up or the characteristics of the domestic visitor segments.

The study also recognized that business visitors may constitute a unique, separate segment on the island. Since they have different reasons for traveling and have trip characteristics compared to the rest of visitor groups on the island, this segment warrants future investigation. We should not be too hasty in dismissing the business visitors as irrelevant to the tourism industry. In many cases, especially on island-destination such as Langkawi, it is an inconceivable idea to think that the business visitors would somehow manage not to engage in tourist-related activities. At the very least, they could take a short walk to enjoy the scenery around the island, or shop for some souvenirs to bring home.

The stakeholders of tourism industry on the island can take advantage of information provided by the study to develop more effective marketing strategies to reach the domestic visitor market. The study findings could also be used by marketing managers as opportunities to improve services and facilities for the various types of attractions on the island. This would maximize visitor satisfaction, and enhance the perceived value and desirability of the services and facilities available on the island. Additionally, the information can be of value in deciding on types of future tourism product development on Langkawi Island.

Recommendations for Management and Marketing

The research findings point to several marketing and management implications

for tourism stakeholders on Langkawi Island. Most importantly:

(1) Collaboration initiatives should be made by the stakeholders to promote different

types of attractions on the island. The findings have shown the synergistic

relationship between the attractions in stimulating visits to the island. Further

attention should be given to the growing interest of historical attractions to

domestic visitors. There is a necessity for improving services and facilities at the

historical sites on Langkawi. Interpretive programs, for instance, should be

provided to deliver information about the sites and enhance visitor's experience.

Efforts could also be made to expand several improvement projects, such

as the Heritage Trail, in order to incorporate other historical attractions in the state

of Kedah. Many visitors had indicated their intention to visit historical sites such

as Bujang Valley Archaeological Sites, Kuala Kedah Fort and Royal Complex in

Alor Setar during their trip to Langkawi. Kuala Kedah Fort for example, is

located just across the river from the ferry terminal. A viewing deck could be

constructed at the terminal so tourists might enjoy the scenery. Pay-to-view

telescopes could also be installed on the deck for those visitors who wish to see

the fort up close. Additionally, since most visitors travel by using their own

transportation, billboards and directional signage may be erected along the

highway and major roads to present information and/or lure tourists to the

historical sites.

(2) There is a need to identify Langkawi's tourism brand image. From tourism

marketing perspectives, brand image creation is crucial in developing a

positioning strategy for tourism destination. The current and future attractions on

the island should present a quality tourism experience that fits its brand image.

Langkawi's promotional campaigns should raise the profile and significance of

these attractions to gain greater response from the targeted market. More

importantly, the Langkawi's tourism brand must be supported by visual and

verbal language to support the market positioning and values of the island.

To create a tourism brand and position Langkawi as a beach and shopping

destination would be in direct competition with other similar regional island-

destinations such as Penang, Phuket (in Thailand) and Bali (in Indonesia). Phuket

for example, possesses attractions which are almost similar to Langkawi –

excellent beaches and spectacular coastal scenery. Penang Island, which is located

south of Langkawi, has more well-established holiday resorts and shopping

facilities. In this regard, however, Langkawi has the advantage over Penang for its

status as a duty-free shopping zone.

Based on this argument, one recommendation then is to create Langkawi's

tourism brand based on its rich historical and natural attractions, including

outdoor recreation activities. A Langkawi brand could be created in order to

highlight an awareness that "Langkawi" symbolizes a special experience and

place where one can come to enjoy natural and historical attractions at the same

place. The message could be communicated to the market by using logo and

advertisements that depict or showcase the co-existence of both types of

attractions on the island. A slogan such as '... where legends and adventures begin....' (...*legenda dan kembara bermula di sini*....) is recommended to be portrayed consistently with the logo and in all advertisement for future marketing campaigns.

(3) Concentrating only on certain types of attractions on Langkawi poses a few issues, including over-use of attraction sites, a narrowing market selection, and not optimizing the diversified tourism resources. Therefore, it is also recommended for tourism stakeholders to consider a diversification strategy: 'the development of a greater variety of tourism products by the destination to obtain greater overall market share' (June and Smith, 1987). This diversification strategy however, should be pursued without diluting the overall attractiveness of the destination by slipping into mediocrity.

The primary goals of a diversification strategy are (a) to increase visitor stay and spending on the island, and (b) to ensure satisfaction among repeat visitors. Under this diversification strategy, other types of attractions, although considered as less important by visitors, are still important for creating synergy to attract visitors to Langkawi. Further development and promotion of other types of attractions, such as sports and festivals, and theme parks will offer a variety of experience. This will create the image of 'so many things to do' in visitors' minds and may encourage them to stay longer on the island. Diversification also will greatly widen the potential market. For instance, Langkawi is becoming recognized for offering a range of tourism products around sports and special events. Activities, such as cycling, have received growing interest and support due

to the success of organizing the annual event of Tour de Langkawi. The island's appeal for cycling has the potential for further development of the competition component and also for pleasure purposes.

More efforts to promote Langkawi's tourism products are needed for distant-state markets such as Terengganu, Johor, Sabah and Sarawak. Distance visitors might discover what Langkawi has to offer during their initial trip. Advertising campaigns to increase Langkawi's tourism brand awareness and desire to visit (and re-visit) might be appropriate for this market. Such campaigns may include distributing free posters and stickers depicting Langkawi's tourism appeal to visitors. Additionally, given the increasing effectiveness of the Internet in promoting tourism destination, the technology could be of use in communicating the value of Langkawi's tourism products to the market. The use of this new technology could also be converged with the conventional advertising campaigns to entice potential visitors to Langkawi.

(4) Results of this study imply that market segmentation should be used as supplementary as opposed to being the primary base for designing management and marketing strategies for the tourism industry on Langkawi. Despite limitations of the findings, target marketing is recommended over mass marketing. Therefore, the strategies presented in the following paragraphs may be recommended for targeting the domestic visitor segments.

Given the difficulties in changing tourist's attitudes toward a destination in the short run, the immediate promotional campaigns should target the segment with favorable attitudes toward Langkawi, i.e., the Historical Vacationer Segment.

Such short-term campaigns may also concentrate on those in-state travelers. Its size (comprising about 48 percent of total respondents) justifies that this is a visitor segment the stakeholders cannot afford to ignore. The relatively short distance for trips is a huge incentive for this group to keep visiting the island. Since this segment contains visitors who tend to stay a short time on the island, they might like a half-day package that includes a tour of historical sites such as Air Panas Village, Mahsuri Mausoleum, and Beras Terbakar. A visit to shopping districts could be included in the itinerary.

The Recreational Traveler Segment is especially attracted to nature and outdoor recreation and shopping activities. Establishing outdoor and nature oriented attractions, such as outdoor recreation centers will help to catch the attention of this segment. Furthermore, organizing special events, such as orienteering and canoeing competitions will place the island as one of Malaysia's destinations for active outdoor-oriented pursuits among this segment.

Perhaps, the greatest potential for future market development lies in the Recreational Traveler Segment. There are three characteristics of this segment that may present the stakeholders with opportunities to take advantage of market development. Firstly, this segment is a disproportionate size compared to the other segments, representing about 83 percent of the domestic visitors to the island. Secondly, members of this segment, in general, have an average or lower attitude toward the island. Thirdly, the study indicates that members of this segment have frequented Langkawi the least of all three segments.

Two possibilities for addressing the characteristics of this segment seem feasible in this regard. First, the pessimistic or unenthusiastic attitude toward the destination may be lessened through proper advertising and promotional campaigns. Consistent advertisement in the media for example, may help to communicate what types of attractions are available and that there are 'things to do' on the island. According to Hudson and Gilbert (2000), lack of knowledge about an activity or destination is one of many constraining factors for participation in pleasure trip. Second, members of this segment could be enticed to visit or re-visit the island by employing a range of sales promotions. For instance, giveaways (e.g., free stay at hotels after staying for a number of nights), coupons for ferry rides, 'two-fers' (two for the price of one sales) and other techniques may be effective in enticing a trial of different tourism products on the island and repeat visitors.

Limitations and Recommendations for Future Research

Despite the efforts which were expended throughout the design, implementation, data analysis, and interpretation stages of this study, there are, nonetheless, a number of important limitations attached to the present study. The most important of these limitations will be discussed in this section, along with recommendations for how future research may appropriately deal with the shortcomings.

It was noted in the previous chapter that the timing and location of data collection may affect sample characteristics such as travel party composition, state of origin, as well as other socio-demographic characteristics. It was suggested, therefore, that future

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research should include visitors at another entry point to the island or specifically the Langkawi International Airport to increase the generalizability of the study. Although a sample at this site may be biased toward more up-scale visitors, it would still be interesting to determine if the results differ from the present study. Additionally, surveys conducted at different time periods, or over a longer time period, might yield a different result.

The current study has made sure that enough measures were taken in the identification of as many types of attractions as possible to be studied. However, the ultimate choice of attractions during the study design remained, to some extent, a question of arbitrary judgment. During the implementation stage of the survey, consultation with experts in the field, including LADA and Tourism Malaysia officials, discovered that certain attributes such as 'art and handicraft' and 'architectural' attractions were missing from the list of attractions studied. They agreed, however, that these types of attractions were minor and, in some ways, were incorporated as a part of other attractions included in the study. It was suggested, therefore, that substantial research efforts are needed in the future to conduct unstructured, in-depth interviews with tourism experts and actual visitors. Statistical procedures, such as factor analysis, could be employed to help identify the salient dimensions that represent attributes of the destination.

The current study, while providing an underlying structure of the domestic visitor characteristics and their travel behavior, suggests the need for further confirmatory research. This includes replication of this study at other destinations which could use the same construct and model. Therefore, comparisons can be made on the responses of

visitors to Langkawi and other destinations in Malaysia. From a marketing standpoint, such comparisons may provide crucial information on Langkawi's stand in the highly competitive local and regional tourism environment. Refinements, nonetheless, are always needed to produce more definitive results.

While admittedly preliminary in scope and even considered to be an exploratory inquiry, the current study sheds some light on the characteristics of domestic visitors to Langkawi Island. Considering the lack of information on the visitors, this study may provide the basis for future research on the island. For example, future studies may gather information about benefits sought by visitors to the island and their expectations and satisfaction. This information might be used as a basis for segmenting the visitor market. According to Mahoney (1979), such segmentation provides managers with an understanding of the motivations which lead tourists to a destination and "places management in a better position to design promotional messages that more closely match the desires of those (visitors) they wish to attract" (p.192).

APPENDICES

APPENDIX A
SAMPLING DAYS

Weekdays	Monday	Tuesday	Wed	Thursday
			8/8/01 pilot survey	8/9/01 pilot survey
	8/13/01 8am – 6pm	8/14/01 8am – 6pm	8/15/01 8am – 6pm	8/16/01 8am – 6pm
	8/20/01 8am – 6pm	8/21/01 8am – 6pm	8/22/01 8am – 6pm	8/23/01 8am – 6pm
	8/27/01 8am – 6pm	8/28/01 8am – 6pm	8/29/01 8am – 6pm	8/30/01 8am – 6pm

Total = 14 actual survey-days
Completion = 347completed surveys

Weekends	Friday	Saturday	Sunday
	8/10/01 8am – 6pm	8/11/01 8am – 6pm	8/12/01 8am – 6pm
	8/17/01 8am – 6pm	8/18/01 8am – 6pm	8/19/01 8am – 6pm
	8/24/01 8am – 6pm	8/25/01 8am – 6pm	8/26/01 8am – 6pm
	8/31/01 8am – 6pm	9/1/01 8am – 6pm	9/2/01 8am – 6pm

Total = 12 actual survey-days
Completion = 407 completed surveys

Note:
Weekend includes Friday, Saturday, Sunday
8/31/01 – 9/2/01 is the Independence Day Weekend

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TOURISM MALAYSIA.

Department of Parks, Recreation
and Tourism Resources
Michigan State University

For Office Use	
Code: am	pm
Date	

INSTRUCTIONS TO PERSON FILLING OUT THIS SURVEY

We are interested in gathering information about your current trip to Langkawi Island and finding out about your opinion on tourism attractions on the island. Your responses will help us shape the future of tourism development and promotion on the island. This survey will take 7 to 10 minutes of your time. Your participation is entirely voluntary and your responses are confidential, to be used only for the purposes of this study. You may choose not to answer certain question or discontinue your participation at any time. You indicate your voluntary agreement to participate by completing and returning this questionnaire. Thank you.

SECTION 1: INFORMATION ABOUT YOUR TRIP FROM HOME TO KUALA KEDAH FERRY TERMINAL

*Please provide us information about this trip. All questions in this section pertain only to your current trip from your home to **Kuala Kedah Ferry Terminal**.*

Q1 How did you travel from your home to Kuala Kedah Ferry Terminal (Please ✓ only **One** box)

❑ Car ❑ Taxi

❑ Motorcycle ❑ Public (scheduled) bus

❑ Rented bus ❑ Train

Q2 Is visiting Langkawi Island your **ONLY** reason for your trip?

❑ **YES** (go to Q3)

❑ **NO**

> **Q2a. Is visiting Langkawi Island a primary reason for making this trip?**
> ❑ **Yes** (Go to Q3)
>
> ❑ **No** (Go to Q2b below)
>
> Q2b. What are your reasons for the trip? (✓) **Check all that apply** to you.
>
> ❑ Visiting family/friends ❑ Shopping
> ❑ Business trip (work only) ❑ Sightseeing/touring
> ❑ Business with pleasure ❑ Traveling to other
> ❑ Others, destination (*write town/city*)
> specify,_____ _____

Go to Q3
(next page)

SECTION 2: LENGTH OF TRIP

We are interested in knowing the length (day and night) of your current trip. Please answer Q3 to Q8. Keep in mind that unless stated otherwise, questions in this section concern with your trip from home to Langkawi Island and back to your home.

Q3 Where is your permanent residence located? _____ _____

                                                          PostalCode   **State**

For Q4 and Q5, please use the calendar shown on the last page to provide your answer.

Q4 What day and date did you leave home on this trip?

M	Tu	W	Th	Fr	Sa	Su

Day (Circle)

/08/01
Date

Q5 What day and date do you plan to **arrive back** home from this trip?

M	Tu	W	Th	Fr	Sa	Su

Day (Circle)

/08/01
Date

Q6 How many nights do you plan to spend away from home **on the entire trip?** _____ Nights (*A)
(Please write 0 if you don't plan to spend any nights away from home; go to Q9)

Q7 How many of these nights do you plan to spend **on Langkawi Island?** _____ Nights (*B)
(Please write 0 if you don't plan to spend any nights on the island; Go to Q8)

> **Q7a What type of accommodation will you use on Langkawi?**
>
> ❏ Hotel/Motel   ❏ Staying with friends/family
> ❏ Camping   ❏ Resort
> ❏ Chalet   ❏ Others (specify) _____

Q8 How many nights have you spent or do you plan to spend **at locations**   Nights (*C)
       OTHER than Langkawi Island, including your travel back home?
       (Please write 0 if you are not spending any night on other locations; Go to Q9)

                                                                                       ***A= B+C**

> **Q8a. Please indicate number of nights (and type of accommodation) that you have spent or plan to spend at locations other than Langkawi Island on this trips.**
>
> | Location
(city, town) | Number of Night(s)
Specify number | Type of Accommodation
Please (✓) : |
> |---|---|---|
> | 1._____ | _____ nights (*D) | ❏ Hotel/Motel   ❏ Staying with friends/family
❏ Camping   ❏ Resort
❏ Chalet   ❏ Others (specify) _____ |
> | 2._____ | _____ nights (*E) | ❏ Hotel/Motel   ❏ Staying with friends/family
❏ Camping   ❏ Resort
❏ Chalet   ❏ Others (specify) _____ |
>
> *Note: D+E should = C*

SECTION 3: CURRENT TRIP TO LANGKAWI ISLAND

Questions in this section pertains to this visit to Langkawi Island.

Q9 **How important were the following tourism attractions in your decision to travel to Langkawi on this trip?** *Please indicate your response by using a scale between 0 to 4.*
A zero (0) shows that the attraction has no importance to you. A four (4) shows that the attraction has great importance to your decision to visit Langkawi on this trip.

Type of Attraction	Not Important				Extremely Important
Historical attractions.................	0	1	2	3	4
Shopping complexes..................	0	1	2	3	4
Beaches	0	1	2	3	4
Theme Parks...........................	0	1	2	3	4
Sport and Special Events	0	1	2	3	4
Nature/ Outdoor Recreation..........	0	1	2	3	4
Agriculture Tourism Attractions.....	0	1	2	3	4
Holiday Resorts..................	0	1	2	3	4

Q10 **In your perception, what types of attraction are available on Langkawi Island?** *Please rate by circling the scale between 0 (None Available) to 4 (Many/Much Available), even if you have never visited the island.*

Type of Attraction	None Available				Many/Much Available
Historical attractions.................	0	1	2	3	4
Shopping complexes..................	0	1	2	3	4
Beaches	0	1	2	3	4
Theme Parks...........................	0	1	2	3	4
Sport and Special Events	0	1	2	3	4
Nature/ Outdoor Recreation..........	0	1	2	3	4
Agriculture Tourism Attractions.....	0	1	2	3	4
Holiday Resorts..................	0	1	2	3	4

Q11 What is your purpose(s) for visiting Langkawi Island? (✓) **Check all that apply** to you.

- ❑ Visiting family/friends
- ❑ General sightseeing/touring
- ❑ Business trip (work only)
- ❑ Business with pleasure/recreation
- ❑ Shopping
- ❑ Educational trip
- ❑ Others, specify_____

Q12 Is this your first trip to Langkawi Island?

❑ **NO** ⟶

Q12a. When did you first visit Langkawi Island?   _____
Year

Q12b. How many trip(s) to Langkawi have you taken during the last 12 months?
____ **trip** (s)

Q12c. Have your visited any historical sites on your previous trips to Langkawi Island?
❑ **No** (go to Q13)   ❑ **Yes** (go to Q12d)

Q12d. In Column A write all the historical attractions **on Langkawi** you have visited during the last 12 months. In Column B your answers should be specific to the historical attractions on Langkawi that you have visited.

A Write all the historical attractions **in Langkawi** you have visited during the last 12 months.	B On the scale of 0 to 4, please rate your satisfaction level with your previous experience at historical attractions in Langkawi? (please **circle one** number).				
	Not Satisfied	Somewhat Satisfied	Satisfied	Very Satisfied	Extremely Satisfied
	0	1	2	3	4
_____ ⇨	0	1	2	3	4
_____ ⇨	0	1	2	3	4
_____ ⇨	0	1	2	3	4

❑ **YES** ⟶

Q12e.Before arriving at the Kuala Kedah Ferry Terminal, were you aware of any historical attractions on Langkawi Island? Please check (✓).
❑ **No** (Go to Q13)   ❑ **Yes** (Go to Q12e below)

Q12e. What source of information made you aware of historical attractions on Langkawi? Please check (✓).
- ❑ Family or friends
- ❑ Travel agent
- ❑ Internet
- ❑ Program on radio or television
- ❑ Printed articles (newspaper, magazine etc.)
- ❑ Others (specify)_____

Go to Q13

Go to Q13
Next page

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Q13 Please check (✓) all activities that you plan to participate in during **this trip** to Langkawi:

General Activities
❑ Shopping
❑ Touring / sightseeing
❑ Visiting family/friends

Visiting Tourist Attraction
❑ Theme Parks
❑ Festival/special events
❑ Agricultural tourism attractions

Water-Based Recreation
❑ Scuba diving
❑ Swimming (sea)
❑ Jet Skiing
❑ Fishing (sea)
❑ Speed Boating
❑ Canoeing / Kayaking

Sports and Outdoor Recreation
❑ Trail Hiking
❑ Picnicking
❑ Nature Photography
❑ Golfing
❑ Rock Climbing
❑ Cave exploration
❑ Swimming (river/waterfall)
❑ Fishing (river/freshwater)

Q14 How many **other persons** (not counting yourself) are accompanying you on this trip to Langkawi Island? (*If you are traveling alone, write 0 and go to Q16*)

_____
Person(s)

Q15 What is the gender and age of other persons traveling with you to Langkawi Island? (**Specify number for each category. Do not include yourself**)

Children	Male	Female	Adults	Male	Female
Under 5 years of age	___	___	18 to 35 years old	___	___
5 to 12 years old	___	___	36 to 59 years old	___	___
13 to 17 years old	___	___	60 years of age and older	___	___

Q16 On this trip to **Langkawi Island**, do you plan to visit any historical attractions?
❑ Yes   ❑ No

Q17 On this trip from home, have you **visited or do you plan** to visit any of the following Kedah's historical attractions?

Q17a. Bujang Valley................ ❑ Yes   ❑ No
Q17b. Kuala Kedah Fort........... ❑ Yes   ❑ No
Q17c. Museums in Alor Setar...... ❑ Yes   ❑ No

Q18 The decision on places to be visited on this trip was made **primarily by**....
(Please ✓ only **One** box)
❑ Myself
❑ Spouse/Partner
❑ Children of family
❑ Friends and relatives
❑ Joint decision (with spouse/partner)
❑ Travel agent
❑ Others, specify _____

SECTION 4: TRAVEL TREND

Questions in this section pertains to your pleasure trips you have taken during the last 12 months (August 2000 to July 2001) to destinations both domestic and international.

Q19 Not including this trip, have you taken any pleasure trips of at least 80km. from home during the **last 12 months**?

❑ **NO** (go to Q20)

❑ **YES**

Q19a. How many pleasure trips? _____
Number of Trips (*A)

Q19b. Please indicate how many of these trips were to domestic or international destinations? (Indicate number of trips in space below)

_____   _____   *Note: B+C=A*
International trips (*B)   **Domestic trips (*C)**

Q19c. While on these trips did you visit any of these attraction? (Please ✓)

Q19c1	Shopping complexes	❑ **Yes**	❑ **No**
Q19c2	Beaches	❑ **Yes**	❑ **No**
Q19c3	Theme Parks	❑ **Yes**	❑ **No**
Q19c4	Sport and Special Events	❑ **Yes**	❑ **No**
Q19c5	Nature/ Outdoor Recreation	❑ **Yes**	❑ **No**
Q19c6	Agriculture Tourism Attractions ..	❑ **Yes**	❑ **No**
Q19c7	Holiday Resorts....................	❑ **Yes**	❑ **No**
Q19c8	Historical attractions................	❑ **Yes**	❑ **No**

If Yes in 'Q19c8', answer 'Q19d1-Q19d4' below:

Q19d1. Did you visit historical attraction while on any of these pleasure trips? (please ✓ **one box only**).
❑ **Always**   ❑ **Sometimes**   ❑ **Never**

Q19d2. Do you acquire information about historical attractions when planning your pleasure trips? (please ✓ **one box only**).
❑ **Yes**   ❑ **No**

Q19d3. Do you select destinations for pleasure trip based on the number and type of its historical attractions that are available ? (please ✓ **one box only**).
❑ **Yes**   ❑ **No**

Q19d4. What types of activities that you participated in? (✓ **one box**)

❑ Hiking   ❑ Interpretation programs
❑ Touring / sightseeing   ❑ Visited museum
❑ Photography   ❑ Expedition/exploration
❑ Picnicking   ❑ Supervised excavation
❑ Historical research   ❑ Other (specify)_____
❑ Educational programs

Go to Q20
(next page)

SECTION 4: ABOUT YOU

Q20 How old are you? : _____

Q21 What is your gender (please ✓)   ❏ Male   ❏ Female

Q22 Please write your approximate household monthly income: **RM** _____

Q23 What is your highest level of education (Please ✓ only **ONE** box)

❏ Primary School   ❏ Tertiary (college/university)

❏ Secondary School   ❏ No formal education

Q24 What is your current employment status (Please ✓ only **ONE** box)

❏ Employed full time   ❏ Student

❏ Employed part-time   ❏ Homemaker

❏ Unemployed   ❏ Retired

❏ Own business   ❏ Others, specify _____

Q25 What ethnic group do you belong to (Please ✓ only **ONE** box)

❏ Malay/Bumiputra   ❏ Indian   ❏ Others, specify _____

❏ Chinese   ❏ Sikh

◁ **August 2001** ▷						
Su	Mo	Tu	We	Th	Fr	Sa
			1	2	3	4
5	6	7	8	9	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	

◁ **September 2001** ▷						
Su	Mo	Tu	We	Th	Fr	Sa
						1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30						

THANK YOU SO MUCH FOR YOUR TIME
Please return this questionnaire to researchers or ferry officials

APPENDIX C
COMPARISON BETWEEN BUSINESS AND NON BUSINESS VISITORS

Table C1

Summary of statistical comparisons (t-test) of selected characteristics
between 'business' and 'non-business' visitors to Langkawi Island

Characteristics	Group	Mean	Std. Deviation	t-value	Probability
Number of previous trip to Langkawi	Business	3.31	4.00	-3.50	.001*
	Non-business	2.08	2.87		
Travel group size	Business	1.67	18.85	4.07	.000*
	Non-business	7.76	3.27		
Attractiveness value assigned	Business	51.98	24.43	5.98	.000*
	Non-business	64.29	22.46		

* different at the .05 level of statistical significance

COMPARISON BETWEEN BUSINESS AND NON BUSINESS VISITORS
(continued)

Table C2

Summary of statistical comparison (Chi-square) between 'business'
and 'non-business' visitors to Langkawi Island

Characteristics	Business	Non-business	Statistic
First time visit to Langkawi			
First time visitors	26.7	45.1	$\chi^2 = 17.414^*$
Repeat	73.3	54.9	P<.05
Type of trip			
Overnight	75.2	95.8	$\chi^2 = 64.731^*$
Daytrip	24.8	4.2	P<.05
State of Origin			
Kedahan	64.6	41.8	$\chi^2 = 25.894^*$
Out-of-State	35.4	58.2	P<.05
Activity planned to participate in +			
Shopping	47.8	65.9	$\chi^2 = 17.239^*$
General touring/sightseeing	28.6	79.2	$\chi^2 = 14.530^*$

* different at the .05 level of statistical significance
+ indicates multiple response question; only 'yes' responses reported

APPENDIX D
COMPARISONS BETWEEN NEW ATTRACTIVENESS SEGMENTS

Table D1
Statistical comparisons between alternative (attractiveness) score segments

Variables	Segment 1 (n= 12)	Segment 2 (n=503)	Segment 4 (n=28)	Statistic
Multiplicative Scores [a]				
Historical Attraction	1.08	7.25	15.46	F=94.184*
Shopping	1.92	6.04	13.14	F=59.553*
Beach	1.25	8.30	16.00	F=94.311*
Theme Parks	1.42	3.98	12.21	F=79.585*
Nature/recreation	2.92	5.53	14.93	F=55.660*
Sports /special event	0.48	6.54	11.84	F=66.314*
Agriculture tourism	1.45	4.32	10.34	F=57.876*
Holiday Resorts	2.58	6.41	15.86	F=78.266*
Socio-demographics				
Age [a]	32.25	30.93	31.46	F=0.306
State of Origin				
Kedahan	75.0	41.8	50.0	χ^2= 6.761
Out of state	25.0	58.2	50.0	P>.05
Income group				
<2000	41.7	59.3	42.9	χ^2= 8.614
2001-4000	50.0	34.5	42.9	P>0.05
4001-6000	0	3.6	10.7	
>6000	8.3	2.6	3.6	
Trip Characteristics				
Total night (island) [a]	1.67	2.10	2.14	F=0.632
Total length of trip [a]	1.67	2.32	2.43	F=0.747
Number of previous trip to Langkawi [a]	1.50	1.85	2.71	F=0.700
Plan to visit historical sites on Langkawi Island	50.0	61.9	75.0	χ^2=5.860
Visited historical sites during last trip to Langkawi island	12.5	27.8	52.9	χ^2=8.732*
Previous Visit to LI				
Repeat	66.7	55.7	60.7	χ^2= 1.381
First Time	33.3	44.3	39.3	P>.05

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Table D1
Statistical comparisons between alternative (attractiveness) score segments

Variables	Segment 1 (n= 12)	Segment 2 (n=503)	Segment 4 (n=28)	Statistic
Trip Characteristics				
Type of visit				
Day trip	0.00	7.7	3.6	$\chi^2 = 9.365^*$
Overnight	100.0	92.3	96.4	P<.05
Choice of lodging	58.3	19.8	18.5	$\chi^2 = 14.642^*$
Family/relative	41.7	80.2	81.5	P<.05
Commercial				
Activity to participate				
Shopping +	33.3	61.3	57.1	$\chi^2 = 11.821^*$
VFR+	41.7	20.1	17.9	$\chi^2 = 7.665^*$
Visit Theme+	0	18.6	28.6	$\chi^2 = 27.917^*$
Scuba Diving+	8.3	8.8	7.1	$\chi^2 = 6.699$
Jungle Hiking +	16.7	8.8	3.6	$\chi^2 = 2.228$
Kayaking +	8.3	9.8	7.1	$\chi^2 = 2.752^*$

[a] ANOVA test; mean scores are reported

χ^2 Test of significance of differences in percentages (percent)

* = significant at p= .05

+=multiple-response question

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