

AN ECOSYSTEM OF HEALTH TOURISM IN PENANG

by

SHILADEVI NAGINDAS

**Thesis submitted in fulfillment of the requirements
for the degree of
Doctor of Philosophy**

February 2014

ACKNOWLEDGEMENTS

I would like to recognize the individuals who have contributed in some way or other towards the success of this research project. First and foremost, I would like to convey my sincere thanks to my main supervisor, Professor Norizan Md Nor, who has seen me patiently throughout the tenure of this project. I really value his guidance and advice. I would also like to thank my co-supervisor, Dr Nooriah Yusof for her advice and her time.

I would like to thank my husband, Ashvin Kumar, and my son, Avinash Kumar, for their understanding and support, especially for tolerating me throughout these five years! My sincere thanks also to all my other family members who have contributed in some way or other towards my studies. A special thanks to my brother, Sanjay, for the technical support, and my friend, Nalina, for all the moral support and the prayers.

I would also like to recognize Dr Jeetendra Tejani for his valuable opinions at the initial stage of this project and Ms Kalyani for the statistical advice. Last, but not least, I would like to thank the following personnel from private hospitals in Penang for their support and cooperation in providing the relevant input which was needed for this project: Ms Cheah See Lin (Public Relations Manager, Penang Adventist Hospital), Ms Rose (Chief Executive Officer, Loh Guan Lye Specialist Centre), Ms Tham Wei Wei (Chief Operating Officer, Mount Miriam Cancer Hospital), Puan Nora (Marketing Manager, Island Hospital), Ms Nichole (Marketing Executive, Pantai Hospital), Ms Aileen (Public relations and Marketing Manager, Gleneagles Medical Centre), and Ms Dorothy (Hospital Administrator, Lam Wah Ee Hospital).

TABLE OF CONTENTS

	page
ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iii
LIST OF TABLES	vii
LIST OF FIGURES	ix
LIST OF APPENDICES	xi
LIST OF PUBLICATIONS & SEMINARS	xii
ABSTRAK	xiii
ABSTRACT	xv
CHAPTER ONE: INTRODUCTION	1
1.0 Introduction	1
1.1 Issues and problem statements	3
1.2 Research objectives and assumptions	16
1.3 Methodology	17
1.4 Scope of study	18
1.5 Study area	19
1.6 Organization of thesis	21
1.7 Conclusion	21
CHAPTER TWO: LITERATURE REVIEW	22
2.0 Introduction	22
2.1 Definitions	22
2.2 Evolution of health tourism: Ancient, Modern and Contemporary Health Tourism	32
2.2.1 Ancient health tourism	33
2.2.2 Modern health tourism	35
2.2.3 Contemporary health tourism	38
2.3 Popular health tourism destinations	39
2.3.1 Europe	39
2.3.2 Central America	41
2.3.3 South America	43
2.3.4 India	44
2.3.5 China	47
2.3.6 Singapore	49
2.3.7 Thailand	51

2.4	Theoretical background	55
2.4.1	The irony of modern health tourism	55
2.4.2	Healthcare as an ecosystem	57
2.4.3	Demand, supply and opportunities	59
2.4.4	Push and pull factors	62
2.4.5	Rational choice theory and decision-making process	65
2.4.6	Backward and forward linkages, spillover and multiplier effects	66
2.5	Summary of scholarly studies on health tourism studies in Malaysia	72
2.6	Conclusion	76
CHAPTER 3: METHODOLOGY		78
3.0	Introduction	78
3.1	Conceptual framework	79
3.2	Research process	80
3.3	Types and sources of data collection	82
3.4	Process of data collection	84
3.5	Types of data analysis	89
3.6	Conclusion	92
CHAPTER 4: BACKGROUND OF STUDY AREA		94
4.0	Introduction	94
4.1	Background	95
4.2	Health tourism in Malaysia	96
4.3	Health tourism in Penang	103
4.4	Conclusion	106
CHAPTER 5: CHARACTERISTICS OF THE HEALTH TOURISM INDUSTRY IN PENANG		107
5.0	Introduction	107
5.1	Profile and background of private hospitals	107
5.2	Networking, Manpower and Expertise	117
5.2.1	Networking	117
5.2.2	Manpower and expertise	119
5.3	Medical services, health packages and health tourism packages	124
5.4	Promotion and marketing of health tourism services	134
5.5	Accreditations and quality standards of private hospitals	141
5.6	Conclusion	143

CHAPTER 6: PENANG AS A CENTRE FOR HEALTH TOURISM	144
6.0 Introduction	144
6.1 Profile and background of health tourists	144
6.2 Factors responsible in attracting health tourists	150
6.2.1 Analyses of factors responsible in attracting health Tourists	150
6.2.2 Discussion of factors contributing to Penang's comparative advantage in attracting health tourists	159
6.2.2.1 Cost factor	159
6.2.2.2 Waiting times	161
6.2.2.3 Availability of medical procedures/facilities and medical expertise	163
6.2.2.4 State-of-art-technology	165
6.2.2.5 Quality of healthcare services	167
6.2.2.6 Special value-added services and customer services	168
6.2.3 Other related factors	173
6.2.3.1 Excellent infrastructure and easy accessibility	173
6.2.3.2 Privacy and confidentiality	176
6.2.3.3 Opportunity of having an exotic vacation	177
6.2.3.4 Cultural affinity and ease of communication	178
6.2.3.5 Ease of entry	180
6.2.3.6 Affordable transportation	181
6.2.3.7 Social & political stability	182
6.2.3.8 Having family/relatives in Penang/Lack of insurance coverage in home country	182
6.3 Comparative advantages of Penang versus other states in Malaysia	184
6.4 Comparative advantages of a private hospital versus other private hospitals in Penang	186
6.5 Summary of comparative advantages for health tourism in Penang and the decision-making process of health tourists	187
6.6 Conclusion	194
 CHAPTER 7: ECONOMIC IMPACT OF HEALTH TOURISM IN PENANG	 196
7.0 Introduction	196
7.1 Revenue earned from health tourists	196
7.2 Creation of employment opportunities	207
7.3 Tourism-related activities of health tourists	209
7.4 Formation of backward and forward linkages	213
7.4.1 Backward linkages	215
7.4.2 Forward linkages	223
7.5 Creation of spillover and multiplier effects	227
7.5.1 Spillover effects	228
7.5.2 Multiplier effects	229

7.6	Conclusion	231
CHAPTER 8: COMPETITIVENESS AND SURVIVAL OF THE HEALTH TOURISM INDUSTRY IN PENANG		
		232
8.0	Introduction	232
8.1	Issues and gaps in the health tourism industry	232
8.2	Recent developments and current trends in the health tourism industry	239
8.3	Strategies employed by private hospitals for survival	244
8.4	Recommendations for the health tourism industry	258
	8.4.1 Recommendations to the Government	258
	8.4.2 Recommendations to private healthcare sector	264
8.5	Competitiveness, sustainability and the future of health tourism	270
8.6	Conclusion	284
CHAPTER 9: CONCLUSION		285
9.0	Introduction	285
9.1	Recapitulation of research objectives	285
9.2	Limitations of study	286
9.3	The way forward for health tourism industry in Penang	288
9.4	Recommendations for future research	289
9.5	Conclusion	292
REFERENCES		294

LIST OF TABLES

1.1	Scope of study	18
2.1	Cost comparison for some medical procedures in the United Kingdom, United States of America, Thailand and India	45
2.2	Some large players in the private health tourism sector of India	47
2.3	Comparison of cost for two types of treatments between the United States and China	49
2.4	Major private hospitals groups involved in health tourism in Singapore	51
2.5	Major players in the health tourism scenario in Thailand	53
2.6	Price comparison for two medical procedures in Bumrungrad Hospital, Thailand and the United States	55
3.1	Breakdown by hospital of the number of domestic and foreign patients	89
4.1	List of public and private hospitals in Penang	97
4.2	Cost comparisons and the percentage savings for popular medical procedures in Malaysia and the United States	98
4.3	Major healthcare providers involved in health tourism in Malaysia	101
5.1	Profile of private hospitals involved in health tourism in Penang	109
5.2	Time period in which private hospitals first started receiving domestic and international health tourists	112
5.3	Source areas of patients seeking treatment at private hospitals in Penang	113
5.4	Breakdown of international health tourists originating from Indonesia	116
5.5	Composition of doctors employed at private hospitals in Penang, 2010	121
5.6	Composition of nurses employed at private hospitals in Penang, 2010	122
5.7	Qualification of nurses employed by private hospitals in Penang	123
5.8	Training of nurses employed by private hospitals in Penang	123
5.9	In-house training colleges for nurses, located at the private hospitals in Penang	124
5.10	Type of treatments and medical services provided by private hospitals	126
5.11	Types of treatment sought by domestic and international health tourists in Penang	128
5.12	Target groups for promotion of medical services by private hospitals	135
5.13	Methods of promoting and marketing of medical services by private hospitals	136
5.14	Frequency of updating healthcare websites by private hospitals in Penang	137
6.1	Type of accommodation for the health tourists / their companions in Penang	148
6.2	Popular accommodations of health tourists and /or their companions	149
6.3	Source of information about accommodations for international health tourists	149
6.4	Length and types of visas issued to international health tourists arriving at Penang	150
6.5	Reasons for not undergoing treatment in home state/country (push factors)	151
6.6	Rotated Component matrix for factors responsible in attracting health tourists to private hospitals in Penang	152

6.7	Rotated Component Matrix based on the extraction method to show the reasons for health tourists in choosing Penang as their destination for medical treatment	154
6.8	Rotated Component Matrix to show the reasons for health tourists for choosing Penang versus other states as their destination for medical treatment	155
6.9	Rotated Component Matrix showing the factors involved in choosing hospital to carry out medical treatment	156
7.1	The number of persons who accompany health tourists and their relationship with health tourists	201
7.2	Frequency of visit by domestic and international health tourists to Penang for medical reasons	206
7.3	Percentage of healthcare products sourced locally by private hospitals in Penang	217
7.4	Increase in local purchase of items by private hospitals in Penang, 2005 - 2010	217
7.5	Examples of healthcare products sourced locally by private hospitals in Penang	218
7.6	Examples of local sources from which private hospitals in Penang source their healthcare products	218
8.1	Problems faced by private hospitals in attracting health tourists	233
8.2	Problems faced by health tourists	235
8.3	Rotated Component Matrix for levels of satisfaction for services offered by private hospitals in Penang	238
8.4	Regular upgrade of medical technology and healthcare facilities by private hospitals in Penang	246
8.5	Steps taken by private hospitals in Penang to reduce cost	248
8.6	Comparison of treatment and boarding charges between domestic and international health tourists at private hospitals in Penang	249
8.7	Targeting of countries for health tourism by private hospitals	251
8.8	Steps taken by private hospitals to cope with the robust growth of the health tourism industry in recent years	253

LIST OF FIGURES

1.1	Location of seven private hospitals selected for study	20
2.1	Demand and supply balance of tourism	61
2.2	The Economical Components of Tourism	62
2.3	Push factors in health tourism	64
2.4	Pull factors in health tourism	65
2.5	An illustration of multiplier effects	71
2.6	An example of the multiplier effects of the health tourism industry	72
3.1	Conceptual framework of health tourism in Penang	80
3.2	Research process	82
3.3	An example of a scree plot	93
5.1	The area of origin of domestic and international health tourists surveyed	114
5.2	Profiles of Hospital E and Hospital G based on the source of domestic health tourists received in the year 2009	117
5.3	Hospital profile of Hospital G based on the source of international health tourists received in the Year 2009	118
5.4	Trend in the number of doctors employed at private hospitals in Penang over the years	120
5.5	Trend in the number of nurses employed at private hospitals in Penang over the years	121
5.6	Examples of two medical packages offered on-line by Pantai Hospital in Penang	130
5.7	Percentage of health tourists surveyed who came to Penang under health tourism packages	131
5.8	Percentage of international health tourists with services included in their health tourism packages	132
5.9	Examples of joint promotion of health tourism packages offered by private hospitals and hotels in Penang	134
5.10	Banners promoting health tourism in Penang at Polonia International Airport in Medan	139
5.11	Sources of information about hospital chosen for medical treatment by domestic and international health tourists	140
6.1	Age category of the domestic health tourists surveyed	146
6.2	Age category of the international health tourists surveyed	147
6.3	Scree Plot with Eigen values showing the reasons for health tourists to have chosen Penang as their health tourism destination	153
6.4	Scree Plot with Eigen values showing the reasons for health tourists to have chosen Penang, versus other states, as their health tourism destination	155
6.5	Scree Plot with Eigen values showing the factors involved in choosing hospital to have treatment done	156
6.6	Comparison of waiting times based on hospital survey and patients' survey	157
6.7	Rating of the quality of medical facilities by private hospitals in Penang	158

6.8	Type of special value-added services rendered by private hospitals in Penang to domestic and international patients	158
6.9	Types of other customer services provided to health tourists by private hospitals in Penang	159
6.10	Sample lists of accommodations available at Loh Guan Lye Specialist Centre	171
6.11	Health tourists with insurance coverage	183
6.12	Summary of Comparative advantages of Penang in attracting health tourists	188
6.13	The flow of the health tourism activity and the decision-making process by a health tourist coming to Penang	191
7.1	Growth in the number of international health tourists received by private hospitals in Penang	197
7.2	Average amount of money spent by health tourists at private hospitals in Penang (percentage of hospitals)	198
7.3	Gross revenue generated annually from international health tourists at Penang Adventist Hospital, 1999 – 2009	199
7.4	Average length of stay of domestic and international health tourists in Penang before admission to hospital, during admission at hospital and after discharged	203
7.5	Percentage of health tourists who have to come back for follow-up visits	207
7.6	Participation by domestic and international health tourists in sight-seeing/vacation activities in Penang and outside Penang	210
7.7	Participation of domestic and international health tourists in sight-seeing/vacation activities before and after treatment	210
7.8	Participation of health tourists in shopping activities and buying of souvenirs in Penang	212
7.9	Linkages formed by the health tourism industry in Penang	214
7.10	Backward and forward linkages formed by the health tourism industry in Penang	216
8.1	Recommendation of private hospitals by domestic and international health tourists	239
8.2	Strategies employed by private hospitals in Penang to compete globally	245
8.3	Confidence in competing for health tourism in future (from the perspective of private hospitals)	273
8.4	Effect of current economic situation on private hospitals in Penang	274
8.5	Implementation of a master plan for health tourism by private hospitals in Penang	275
8.6	Future of health tourism in Penang, based on the perception of the private hospitals	276
8.7	Trajectory for growth of health tourism in Penang	278

LIST OF APPENDICES

- APPENDIX A Details of some popular international health tourism agents
- APPENDIX B Sample of ‘Letter of Request’ to carry out survey
- APPENDIX C Letter of Authorization from Universiti Sains Malaysia to carry out survey
- APPENDIX D Questionnaire for Hospital Survey
- APPENDIX E Questionnaire for Patient Survey (English)
- APPENDIX F Questionnaire for Patient Survey (Bahasa Malaysia)
- APPENDIX G APHM – HEALTH TOURISM PACKAGES
- APPENDIX H Sample of the Mount Miriam Hospital brochure, in Bahasa Indonesia
- APPENDIX J Three types of luxurious rooms available at Loh Guan Lye Specialist Centre
- APPENDIX K Photos of the seven private hospitals surveyed
- APPENDIX L Sample of the Mount Miriam Hospital brochure, in Bahasa Indonesia
- APPENDIX M Sample of Registration Form in Bahasa Indonesia available at the Penang Adventist Hospital reception counter

LIST OF PUBLICATIONS & SEMINARS

Shiladevi Nagindas & Norizan Md Nor (2011), *Health Tourism in Penang – A Stimulus for Economic Growth*. Paper submitted & presented during ‘Persidangan Kebangsaan Masyarakat, Ruang dan Alam Sekitar’(MATRA) 2011, 16 – 17 November 2011 at Hotel Vistana Penang.

EKOSISTEM PELANCONGAN KESIHATAN DI PULAU PINANG

ABSTRAK

Pulau Pinang pantas muncul sebagai hab pelancongan kesihatan di Wilayah Utara Semenanjung Malaysia, dengan hospital swasta menembusi industri lumayan bernilai jutaan ringgit ini. Kajian ini tertumpu kepada negeri Pulau Pinang, yang merupakan lokasi kepada dua puluh peratus daripada sejumlah tiga puluh lima buah hospital swasta yang dikenalpasti oleh kerajaan untuk menerajui pelancongan kesihatan di negara ini. Objektif utama kajian adalah untuk mengenal pasti ciri-ciri industri pelancongan kesihatan di Pulau Pinang; untuk mengenal pasti dan menganalisis kelebihan bandingan hospital swasta di Pulau Pinang dalam menarik kemasukan pelancong kesihatan yang semakin meningkat; untuk menilai kesan ekonomi pelancongan kesihatan di Pulau Pinang; dan untuk mengenal pasti dan menganalisis strategi yang dilaksanakan oleh hospital swasta di negeri ini untuk terus bersaing dan menjana pertumbuhan berterusan dalam persekitaran global semasa. Dua bentuk kaji selidik telah dijalankan iaitu kaji selidik hospital dan pesakit. Instrumen utama pengumpulan data adalah melalui kaedah temuduga dengan menggunakan borang soal selidik. Kaedah analisis data yang pelbagai telah digunakan untuk menganalisis dan menginterpretasi data. Kombinasi faktor tolakan di negara asal pelancong dan faktor tarikan di Pulau Pinang telah memberikan kelebihan bandingan yang unik kepada Pulau Pinang dalam menarik masuk pelancong kesihatan. Industri pelancongan kesihatan telah membawa kepada pembentukan rangkaian [linkages] huluan dan hiliran serta mewujudkan kesan emparan [spinoffs] yang signifikan dari segi kesan limpahan dan kesan pengganda kepada ekonomi negeri ini. Oleh yang demikian, industri pelancongan kesihatan jelas boleh membawa kesan positif kepada ekonomi Pulau Pinang dan menjadi

rangsangan kepada pertumbuhan ekonomi negeri ini. Walau bagaimanapun, industri ini menghadapi persaingan yang hebat, khususnya di peringkat global. Hospital swasta telah melaksanakan pelbagai strategi sejak kebelakangan ini untuk kekal berdaya saing dan berkembang maju. Memandangkan industri pelancongan kesihatan boleh mencipta kekayaan dan menjana pendapatan, kerajaan telah mengambil langkah-langkah proaktif untuk mengukuhkan lagi industri ini yang dianggap kebal terhadap kesan kemelesetan ekonomi. Walau bagaimanapun, terdapat beberapa isu dan jurang yang wujud dalam industri ini yang perlu ditangani segera. Pembangunan dan perancangan jangka panjang adalah perlu bagi memastikan kelangsungan industri lumayan ini. Walaupun masa hadapan industri pelancongan kesihatan di Pulau Pinang penuh dengan cabaran, namun Pulau Pinang mempunyai potensi untuk menjadi pintu masuk kepada pelancongan kesihatan dan pusat kecemerlangan perubatan di rantau ini.

AN ECOSYSTEM OF HEALTH TOURISM IN PENANG

ABSTRACT

Penang is fast becoming a hub for health tourism in the Northern Region of Peninsular Malaysia, with private hospitals tapping into this lucrative multi-million ringgit industry. This research is focused on Penang, which is the location of twenty percent of the thirty-five hospitals earmarked by the government to lead health tourism in the country. The main objectives of this research were to carry out a preliminary study to identify the characteristics of the health tourism industry in Penang; to identify and analyze the comparative advantages of private hospitals in Penang in being able to attract an increasing influx of health tourists in recent years; to evaluate the economic impact of health tourism in Penang; and to identify and analyze the strategies employed by these hospitals to compete and to experience further growth in the current global environment. Two types of surveys were conducted: the hospital survey and the patient survey. The main instrument of data collection was the interview method, using questionnaires. Mixed methods of data analyses were employed to analyze and interpret the data. A unique combination of certain push factors in source areas and pull factors in Penang have given Penang the unique comparative advantage in attracting health tourists to its shores. The health tourism industry has led to the formation of important backward & forward linkages, and created significant spinoffs in terms of spillover effects and multiplier effects in the economy of Penang. Thus, the health tourism industry has a positive impact on Penang's economy and is a stimulus to its economic growth. However the industry faces intense competition, especially globally. The private hospitals have employed various strategies over recent years to remain competitive and to grow. Realizing that the health tourism industry is a wealth creator and a money spinner, the

government has taken proactive measures to further enhance this almost recession-proof industry. There are certain issues and gaps in the industry which need to be addressed urgently. Long term development and planning are necessary for the survival and sustenance of this lucrative industry. Although the way forward for Penang's health tourism industry is full of challenges, Penang has the potential to establish itself as a gateway for health tourism and as a centre of medical *par excellence* in this region.

CHAPTER 1

INTRODUCTION

1.0 Introduction

Tourism is a leading industry in the service sector, and currently the third largest and one of the fastest growing industries in the global economy. Tourism is responsible for one out of twelve jobs and revenue amounting to US\$1.1 trillion (RM3.4 trillion) annually (Carvalho 2011). Tourism is a significant generator of foreign exchange earnings and a contributor to economic growth in many countries.

Health tourism is an emerging sector in tourism, and currently the hottest trend in the global healthcare industry. Health services are now increasingly advertised in a global market place. Hip and knee replacements, ophthalmologic procedures, cosmetic surgery, cardiac care, organ transplants and stem cell injections are all available for purchase in the global health services market place (Turner 2010).

Health tourism has gained popularity in many countries all over the globe. There are currently 28 countries catering to medical tourists, providing care to more than two million foreign patients annually. Many governments in developing countries see medical tourism as an excellent way to boost the local economy while improving their own health-care systems. The costs of a surgery in another country can be as much as 50 to 80 per cent less than at home (Pafford 2009). The savings can be so significant that they are literally 'life-saving'. The global health tourism industry is estimated to generate around US\$20 billion per year (URL: <http://www.discoverspas.com/>).

What makes health tourism unique and attractive is the mobility of patients. With a current global medical community that knows no boundaries, patients are looking beyond their borders for affordable, high quality medical care at certain health tourism destinations around the world.

Sometimes, due to a few of success stories, a whole country, region or certain hospitals within a country can become famous for special treatments that they offer. Today, certain countries in the world have become popular, specialized health tourism destinations: for example, India has become famous for dentistry, hip resurfacing and heart surgery, Cuba for transplants and cosmetic surgery, Hungary for its sophisticated and professional dental services, China and Hong Kong for cosmetic and medical beauty services, Thailand for gender reassignment surgery, organ transplants and facelifts, and Singapore for neurology, high-end biomedical research and pharmaceutical manufacturing, and the highly complicated ‘tooth-in-eye’ surgery which restores vision in formerly blind patients (Hingerty, M, Woodbridge, J & Wilson, B 2008; SingHealth 2004).

In Malaysia, tourism is the second largest industry after manufacturing and has been growing since the year 2000 with international arrivals increasing by 9% per year. Malaysia was the ninth most visited country in the world in 2010. A total of 24.6 million tourists arrived in Malaysia in 2012 and brought in receipts of RM60.6 billion (Tourism Malaysia 2013). The tourism industry is a major money-spinner and has been a significant contributor to Malaysia’s economic growth in recent years. It has become one of the most important pillars in the national economy, not only generating foreign currency exchange but also creating more employment

opportunities, spillover and multiplier effects, and forward and backward linkages in the economy. The tourism industry has been predicted to contribute RM115 billion to the country's Gross Domestic Product with two million jobs created by the year 2015 (Tenth Malaysia Plan 2011-2015, 2010). According to the United Nations World Trade Organization (UNWTO), Malaysia is likely to be in the top five as the largest and most important tourist destination by 2020 (Star: Nation, 18 October 2011, p.2).

The Malaysian Government has identified health tourism and ecotourism as two of the major potential growth areas in the country's tourism industry. Private healthcare is one of the twelve National Key Economic Areas under the Tenth Malaysia Plan (Tenth Malaysia Plan 2011-2015, 2010). In line with the National Development Policy, the private healthcare sector is considered the engine of economic growth in Malaysia, and is encouraged to expand to complement the medical services provided by the Government sector. Malaysia's health tourism industry has hit record levels with more than 30% growth recorded every year for the past three years (Lim 2012).

1.1 Issues and problem statements

The health tourism industry around the globe currently depicts some prominent trends and issues. 'Doctor-shopping' and 'patient-marketing' which complement each other, are growing trends in health tourism. There is a dilemma between health and health-related tourism: at times, there is some confusion between the two. The characteristics of the health tourism industry vary at different locations promoting it. Health tourism is perceived differently by different groups of people: while

countries promoting health tourism view it positively as it contributes significantly to their economies, others may view health tourism as risky and as a threat to their own economies. Increasing demands and expectations in healthcare have made measurements of quality and standards increasingly important in health tourism. The dramatically rising healthcare costs in the developed countries have made health tourism a viable option whereby patients from these countries seek lower cost treatment alternatives elsewhere. In fact, one of the most pertinent issues facing the health tourism industry itself in recent years is escalating costs. Health tourism has significant economic impact on the economy of many countries in terms of revenue, foreign exchange, employment opportunities and formation of linkages. Lastly, there is increasing global competition facing the health tourism industry in many countries promoting health tourism. Various steps and strategies have been employed by different countries in order to survive, sustain and grow further to increase their market share for this lucrative industry. Each of these issues will be discussed here, while at the same time, identifying the problem statements (highlighted) for this research.

‘Doctor-shopping’ is the in-thing in health tourism today, whereby patients surf the internet to find exotic locations to have their medical procedure, cosmetic surgery or full medical check-up done. The sourcing of medical and healthcare services is no longer limited to national boundaries. Instead, it has become part of a global medical community without any boundaries. While medical services in the western countries are being outsourced, a growing number of countries are offering sophisticated medical care and services at affordable prices. This trend is known as ‘patient-

marketing', which is made easier through informative websites, transparent pricing schemes, and advertising in in-flight magazines.

Health tourism covers a wide range of services which can be generally categorized into two categories: health tourism *per se* and health-related tourism. These two sub-categories are often confused or lumped together as one. Health tourism *per se* strictly covers medical and surgical care. Medical care involves the treatment of a disease or medical condition through the services provided by specialized health care facilities and professionals (URL: http://www.tim.hawaii.edu/ctps/health_tourism.pdf). Health-related tourism, on the other hand, covers a more general area which includes aesthetic medical services or beauty-care, spas, sun and sea bathing, food and nutrition, reflexology, yoga, aromatherapy and alternative medicine. The domain of health-related tourism also encompasses fitness and wellness, which cover a wide range of activities and programs that are primarily 'preventive' in nature, such as exercise or nutrition regimes.

The characteristics of the health tourism industry vary at different locations promoting it. Every place, and in fact, every hospital promoting the industry, has unique beginnings. For example, health tourism in Europe has been closely connected to the growth of spas in the past, and the tradition continues till today. The Japanese have had a unique tradition of *onsens* or hot springs. On the other hand, health tourism in India and China has very strong beginnings in traditional medicine: India has been famous for its yoga and meditation techniques in healing, while the Chinese are famous for all kinds of traditional herbs and techniques such

as acupuncture. Today, both India and China continue to practice traditional therapies alongside modern medicine; this contributes to the uniqueness of their health tourism industries. Health tourists to a particular destination may originate from different countries or regions on the globe. Various treatments are offered at every location and each location may be specialized in certain procedures and treatments. The growth and the way this industry develops in each destination are also unique.

In order to understand the development of the health tourism industry at a particular destination, it is necessary to first understand its structure and the environments in which it operates, as well as the associated mechanisms (Thanh 2002).

What are the characteristics of the health tourism industry in Penang? What type of medical treatments and procedures are available in Penang to fulfill the needs of the health tourists who come to its shores in hordes to seek medical treatment? What is the profile of the private hospitals in Penang and that of the health tourists received by Penang? Which are the source areas of these health tourists who are flocking to Penang? How developed is the 'tourism' aspect of the health tourism industry of Penang? These are some of the problem statements which this research will attempt to undertake, as one of the reasons for carrying out this research is to identify and establish the characteristics of the health tourism industry in Penang.

Health tourism is viewed differently by different groups of people. Advocates of health tourism view health tourism as a life-saver for those who cannot afford

medical treatment in their own countries, or for those who are in pain and need urgent surgery which is not available in their own countries or not covered by insurance. The concept of being treated by a foreign physician is nothing new nowadays. For example, one quarter of the physicians in the United States are foreign-born, so the idea of having a Thai or an Indian physician is really nothing very foreign to an American patient these days (Yanos 2008).

However, while affordability makes health tourism attractive to its prospective patients, perceptions of medical tourism are not always positive. In the past, health tourism had sometimes received bad coverage in developed countries and had been labeled as the 'back alley practices in foreign lands'. There were random stories about infections or excessive scarring after surgeries, though these were not the norm. Opponents or skeptics of health tourism, especially in places like the United States which practice high standards of quality, often view health tourism as risky, lacking adequate pre-operational assessment, follow-up and proper care coordination. In case of malpractice, there is lack of protection. Some destinations may become hazardous or even dangerous for medical tourists (Gahlinger 2010). A person who returns home after medical treatment in a foreign country may develop complications or side-effects. Many opponents to health tourism worry that when these patients return to their home country, there is no proper follow-up care coordination. Post-operative care then becomes the responsibility of the medical care system in the patient's home country (Lapitskaya 2005). At times, domestic healthcare providers are hesitant to take on complicated and open cases from unknown foreign providers. However, this kind of negative thinking was soon reversed, especially after many success stories from happy, satisfied patients.

Another issue related to health tourism and quality of healthcare is liability. Although health tourism offers significant cost savings, it can bring increased risks to patients. Going through the host country's legal system in case anything were to go wrong during a procedure in a foreign country can be troublesome, especially if the patient lives far away from the place where he/she received treatment. Moreover, some health insurance providers may not take health tourism into account when insuring patients, as it can involve lots of inconvenience and probably poor outcomes.

Yet, it is in First World countries like the United States that outbound medical tourism has large growth prospects. According to a report by Deloitte Consulting published in 2008, an estimated 750,000 Americans went abroad for healthcare in 2007, and this number was estimated to increase to six million by 2010 (Deloitte 2008). The growth in health tourism has the potential to cost American healthcare providers billions of dollars in lost revenue. Today, the health tourism industry is configuring itself to project a high-technology, professional image reassuring to Western patients, and is a viable cost-saving option for people in need of affordable medical care.

Pafford (2009) has mentioned that American insurance companies have lately begun to integrate foreign care into their coverage, offering discounts to patients agreeing to overseas travel. This kind of 'institutionalized exit' of patients, whereby governments and insurers encourage 'expanded health options' is also developing in

Europe (Laugesen & Varga-Bustamantes 2010). This new development will have tremendous impact on health tourism activities in the near future.

Factors which attract patients seeking medical care to a particular location may range from the quality factors, cost, or time, other than connectivity, infrastructure, availability of expertise and the right technologies, and even cultural factors. Standards are important when it comes to healthcare. For patients considering medical tourism as a treatment option, receiving safe and quality care is an important issue. Therefore, there is increasing emphasis on quality. Medical tourism destinations are responding to consumers' safety and quality expectations by various means: accreditations and certifications for safety and quality by internationally-recognized bodies, affiliations with reputable American provider organizations, and employing American-trained physicians and care teams.

The most important parallel issue related to quality standards in health tourism today is that of hospital accreditation, which revolves around the benchmarking and standardization in accordance with internationally-recognized markers. Potential medical tourists may make their choices based on whether or not hospitals have been assessed and accredited by reputable external accreditation bodies. It gives consumers a level of confidence that the services provided are comparable to those available in developed countries. Today, many hospitals that offer health tourism are accredited by IOS (International Organization of Standardization) and the JCI (Joint Commission International). JCI is the main hospital accreditation agency in the United States, aiming to elevate healthcare delivery standards through evaluation and accreditation of healthcare organizations. Its parent organization, The Joint

Commission, evaluates and accredits hospitals in the United States. JCI has accredited over 100 hospitals in 23 countries (Taured 2009). Bangkok's Bumrungrad International Hospital, which has won international acclaim and is Thailand's best-known facility for health tourism, was the first genuinely international hospital in Asia to be accredited by the JCI.

With organizations such as the Joint Commission (JCI) accrediting these facilities, the safety and quality of care available has become less of an issue. Consumers are willing to travel to obtain medical care that is both less costly and safe. However, with an average of fifty countries having identified medical tourism as a national industry, accreditation and other measures of quality vary widely across the globe. This is an issue of concern in the health tourism industry today.

The dramatically rising healthcare costs in the developed countries have made health tourism a viable option, whereby patients from these countries seek lower cost treatment alternatives elsewhere. Offshore medical procedures can be performed for as little as one-tenth the cost of what would normally be charged in the United States. Therefore, health tourism often offers a solution to these ever-increasing costs of healthcare. However, in recent years, one of the most pertinent issues facing the health tourism industry itself is escalating costs. The cost of healthcare has rapidly escalated in the last one decade (Chia 2010). Major health tourism destinations try to keep their costs low while not sacrificing on the quality of medical care, in a bid to compete for health tourists. An important component in the healthcare cost is medication. Other contributing factors to escalating costs in health tourism are the high cost of sophisticated equipment and facilities which is

sometimes passed on to patients, the tendency for hospitals to carry out unnecessary tests to justify the usage of these facilities, ‘commissions’ given to ‘agents’ who may benefit from the hospitals and/or the patients, and at times, the tendency of doctors to over-charge patients just because they are insured.

Prior to World War II, the doctor’s responsibility to the patient was relatively simpler. It involved a diagnosis and prescribing a treatment; medical knowledge and the range of diagnoses and treatment options were limited. Specialists and other healthcare professionals, apart from nurses, were almost unheard of. Over the years, there has been an explosion in medical knowledge, and the range of diagnoses and treatments has increased tremendously. Healthcare is one of the fastest growing sectors of many economies and is provided in many instances by a team of professionals, led by a doctor. Today, specialists and specialty services are easily available. Thus, healthcare has become more complex and more effective, and at the same time, more demanding. Expectations have grown with global demands.

Awareness about health has also increased in recent years due to increase in income, information and technology. Patients are more educated; they learn and know more about their illnesses, and are more familiar with the treatment options available. Technological advances have helped in speeding up the diagnoses of health problems and diseases. Patients are much more knowledgeable now, and with this knowledge, they have become more demanding. They know what they want, and are aware of some of the new drugs and treatments. They demand the right to better service. For example, health tourists who come to these destinations expect to be cared for by competent, experienced and caring nurses.

The Internet has also dramatically changed the health tourism scenario. The market for health tourism relies heavily on information from the internet. Consumers get to find out about healthcare products and services from the internet. They also obtain travel information from the internet. Many consumers plan and buy health tourism packages via the internet. The internet has also changed the playing field for tourism stakeholders, providing new challenges and opportunities in promoting and selling their products and services (Graham 2009). On-line marketing has become an important tool in health tourism marketing. Diverse medical and healthcare demands are also increasing as the world's population ages. According to statistics by the American National Institute on Ageing, the elderly will increase to 14% of the world's population in 2040 (Star Special: Education Guide, 2 February 2011, p.6). As the world's population ages, the demand for healthcare services will increase as well, at a rapid rate.

In the case of the health tourism industry in Penang, what are the factors responsible in attracting health tourists – or is it a combination of certain factors? Which factors give the private hospitals in Penang the comparative advantages resulting in health tourists selecting Penang as their choice health tourism destination? Is it the quality of services, cost factor, short waiting times, availability of technology, or are there other factors, beyond these factors, which have led to the robust growth of the health tourism industry in the last one decade? How do health tourists know about medical services in Penang? What kind of decision-making process is involved which makes these health tourists decide to have their medical treatments done over here? This research will attempt

to address these problem statements by identifying the factors which give Penang the comparative advantage to attract large volumes of health tourists to its shores.

The health tourism sector has positive economic impact in many countries promoting health tourism. It brings in big revenue and foreign exchange, creates employment opportunities across the economy, and forms backward and forward linkages with various sectors in the economy. Its impact can also be seen in terms of spillover and multiplier effects in related sectors of the economy. Health tourism has improved the economies of popular destinations such as the Cuba in Central America, India, China, Singapore and Thailand.

In Cuba, the medical tourism sector has helped to improve the overall healthcare standards of the state. There has been continuous investment in pharmacology, biotechnology and medical technology. A substantial number of Americans now go to Cuba for medical treatment instead of traveling thousands of miles to India or Thailand. The Confederation of Indian Industry, in consultation with McKinsey and Company, reported that medical tourism in India produces annual revenue of \$300 million, with projected growth to \$2 billion by 2012 (Horowitz, 2007). The health tourism industry has brought tremendous benefits to the Indian economy, and the government of India is going all out to enhance this sector even further. NaRanong (2011), in examining the effects of medical tourism on Thailand's economy and health system, estimated the revenue from foreign patients to grow at an average of 10% per year from 2008 onwards, and the value-added of medical services was assumed to be 66.7% of the gross revenue.

What is the impact of health tourism on the economy of Penang? Other than an increase in revenue and employment opportunities, what kind of impact does it have on other sectors across the economy such as the education, transportation, construction, financial and service sectors? Have significant linkages, spillover and multiplier effects been formed in the local economy by this industry? Is the health tourism industry a stimulus to economic growth in Penang? This research aims to address the above problem statements by evaluating the economic impact of the health tourism industry in Penang.

Finally, there is the issue of the ever-increasing global competition in the health tourism industry. Proponents of health tourism argue that a global market in health services will promote consumer choice, foster competition among hospitals, and enable customers to purchase high quality care at medical facilities around the world (Turner 2010).

Many new players are emerging in the global health tourism scenario. Every health tourism destination obviously wants a bigger portion of the health tourism pie, and therefore tries to make a stronger footing in the industry. Certain 'non-urgent' subsectors of this industry such as the cosmetic surgery or other beauty-related subsectors which are more vulnerable to changes in economic conditions than others are likely to be affected most during economic downturns. The likelihood is that people who might have considered medical tourism may decide to postpone their expenditure. In countries where medical tourism is influenced by waiting lists, patients may decide to hold out for free treatment in their own country rather than opting for the out-of-pocket, immediate treatment available elsewhere.

There are conflicting views on how the global financial crisis is affecting medical tourism. The view expressed by organizations such as the Medical Tourism Association is that with the economic crisis, more people are paying attention to medical tourism. However, the harsh reality may be somewhat different. Business Week reported that in some medical tourism hotspots, formerly booming hospitals are seeing empty beds (Polard 2012).

In the face of global competition, many players in the industry have employed various steps and strategies to remain competitive, to sustain their lucrative revenues and to grow further. These strategies range from the switch from branded or patented drugs to generic ones, to bulk purchasing of supplies by group hospitals and improving efficiency wherever possible. The governments of many countries are directly involved in enhancing this lucrative industry which brings in significant foreign exchange.

What are the steps and strategies employed by the private healthcare sector in Penang in the light of the global competition? What is the role of the government in enhancing this sector? What is the future of the health tourism industry in Penang? Will the private healthcare industry in Penang be able to sustain itself, or even grow to greater heights? These issues and problem statements will be addressed and analyzed during this research.

1.2 Research objectives and assumptions

Having put forward the problems statements for this research, four main objectives have been identified for carrying out this research:

Objective 1: To study the characteristics and profile of the health tourism industry in Penang

Assumptions: Not many studies have been conducted on the health tourism industry in Penang despite its increasingly significant role in contributing to the economy of Penang. By studying the characteristics of the health tourism industry in a comprehensive manner, a holistic picture of the industry can be obtained. This will help in the better understanding and future planning of the industry. Since this study is a preliminary study of health tourism in Penang, the first part of this study will be exploratory in nature.

Objective 2: To analyze the comparative advantages of private hospitals in Penang which have resulted in the healthy growth of the health tourism sector in recent years

Assumptions: The private hospitals in Penang have certain characteristics which are providing them with the necessary comparative advantages to attract health tourists, thus leading to the healthy growth of health tourism in Penang in recent years. Certain factors, or a combination of factors, are contributing in helping health tourists make the choice of Penang as their health tourism destination.

Objective 3: To study the economic impact of health tourism in Penang, in terms of its spillover and multiplier effects, as well as the formation of backward and forward linkages with the economy

Assumptions: The health tourism industry in Penang has resulted in spillover and multiplier effects, and formed backward and forward linkages with the economy of Penang. There is significant contribution of this industry for it to have caused a positive impact on its economy.

Objective 4: To analyze the types of strategies employed by private hospitals in Penang to compete for survival and growth in the current global environment

Assumptions: Private hospitals in Penang are able to compete and survive in the current global environment. These hospitals have taken certain steps and employed certain strategies which help them to sustain themselves and to grow further in the current global environment.

1.3 Methodology

The primary data for this research will be collected mainly by conducting two surveys: hospital survey and patient survey. The main instrument for the surveys is the interview method, with the help of questionnaires. In order to conduct the hospital survey, the management staffs of private hospitals will be interviewed, while the patient survey will be conducted on domestic and international health

tourists who come to seek medical care at these hospitals. In addition to these formal interviews, informal interviews will be conducted with accommodation agents and liaison officers, to obtain better insight of the industry. Data will be analyzed using a mixed method approach, which will include qualitative and quantitative methods, situational and content analyses, profiling, and factor analysis using scree plots and rotated component matrices.

1.4 Scope of study

The scope of study for this research is summarized in Table 1.1. Justification is given for each aspect selected in the scope of this study.

Table 1.1 Scope of study

Characteristic	Scope / Focus of Study	Comment / Justification
Definition	Health tourism (versus health-related tourism)	Focus on aspects related to medical and surgical care which are more popular with health tourists who come to Penang.
Type of hospitals	Private hospitals	Health tourism activities in Penang are currently concentrated in private hospitals only; insignificant in government hospitals.
Location	Penang Island	Major healthcare centres in Penang are located on the island (Figure1.1). Health tourism hub in the Northern region of Peninsular Malaysia.
Number of hospitals	Seven: 1. Gleneagles Medical Centre 2. Island Hospital 3. Lam Wah Ee Hospital 4. Loh Guan Lye Specialist Centre 5. Mount Miriam Cancer Hospital 6. Pantai Hospital 7. Penang Adventist Hospital	Earmarked by APHM to participate in the promotion of health tourism, and to spearhead the growth of the health tourism industry in Malaysia.
Type of health tourists	Domestic & International health tourists	Two prominent groups of health tourists who come to Penang: domestic (out-station) & international (foreign).

In summary, this study looks at health tourism *per se*, and excludes *health-related tourism*. The focus of study is on seven private hospitals, located on Penang Island, which is a medical tourism hub in the Northern Region of Peninsular Malaysia. The seven hospitals chosen for this study have been ear-marked by the government to spearhead health tourism into the future. This study looks at both domestic and international health tourists who come to Penang for medical treatments and procedures.

1.5 Study area

The study area selected for this research is Penang Island, which has become the centre of excellence for health tourism activities in Malaysia. The seven private hospitals chosen to be the focus of this research are located on Penang Island. The location of these seven hospitals is shown in the map in Figure 1.1. Gleneagles Medical Centre, Island Hospital, Loh Guan Lye Specialist Centre and Penang Adventist Hospital are located in the city area of Georgetown; Mount Miriam Cancer Hospital is situated in Tanjung Bungah; Lam Wah Ee Hospital in Batu Lintang; while Pantai Hospital is located at Bayan Baru.

Figure 1.1 Location of seven private hospitals selected for study

1.6 Organization of thesis

This chapter is the introduction and background to this whole study. Chapter 2 presents a literature review of health tourism, which discusses the evolution of the industry over time and the theoretical background of this study. Chapter 3 outlines the methodology employed in carrying out this research and lays out the conceptual framework designed for this research. Chapter 4 presents a brief background of the study area. Chapters 5, 6, 7 and 8 highlight the analyses and the discussion of the results obtained based on the four objectives of this study. Chapter 9 lays out some recommendations for future research and the way forward for Penang's health tourism industry *vis a vis* the ever-increasing global competition.

One limitation encountered for this study is the lack of reference materials related to health tourism. Some references could only be found online and at websites, thus the heavy reliability on online references.

1.7 Conclusion

This chapter is an introduction to the whole research. Major issues facing the health tourism industry currently have been discussed and the problem statements for this research have been highlighted. Four research objectives have been identified and the research assumptions have been spelt out. The methodology to be employed during the research, the scope of study, the study area and the organization of the thesis have been briefly discussed in this chapter to give an overall picture of this study.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The definitions of ecosystem, tourism, health and health tourism to be used for this research will be determined. This will be followed by a discussion of outbound, inbound and intrabound health tourism. The historical development of health tourism through time will be followed by a discussion of the popular health tourist destinations in the world today. The theoretical background of health tourism will be analyzed by reviewing the existing literature. The chapter will end with a summary of important scholarly works on health tourism in Malaysia.

2.1 Definitions

(a) Definition of ecosystem

The North American ecologist, E.P. Odum (1969) defined an ecosystem as ‘any unit that includes all of the organisms in a given area interacting with the physical environment so that a flow of energy leads to an exchange of materials between living and non-living parts of the system’. Furthermore, individuals aggregate into populations, populations come together in communities, and a community plus its physical environment comprises an ecosystem (The Dictionary of Human Geography 1994:155). He also asserted that the essential features of the term ecosystem are: (i) that it implies a functional and dynamic relation between the components, going beyond a frozen mosaic of species distribution and (ii) that it is

holistic, implying that the whole possesses emergent qualities which are not predictable from our knowledge of the constituent parts.

Thus, this definition of ecosystem will be adopted in this thesis in order to understand the health tourism scenario in Penang.

(b) Definition of tourism

The term 'tourism' is subject to a wide variety of definitions and interpretations due to the multidisciplinary and abstract nature of the concept of tourism. The Dictionary of Human Geography (1994:634) states that tourism frames massive and continuous flows of people to more and more places all around the globe. For the purpose of this thesis, tourism is taken to be the practice of traveling to and visiting places for pleasure and relaxation; it is the temporary movement of people to destinations outside their normal places of residence and work. Tourism is a complex activity which involves the tourist, the businesses of providing goods and services to the tourist, and the host community. A tourist is one who travels away from home for business, pleasure, personal affairs, or any other purpose except to commute to work. He/she must stay for more than 24 hours at the destination in order to qualify as a health tourist (Adapted from World Tourism Organization 2008).

In order for tourism to take place, an individual has to travel. Today, traveling and vacation have become part of culture. However, traveling today is different from that in the past. Long ago, travelers would take months or years to get to their

destination and back. Today, distance is no longer a barrier. Air travel, in particular, has redefined traveling. This has contributed significantly to the shaping of the tourism industry today.

(c) Definition of health

The definition of health as proposed by the World Health Organization is that health is a state of total mental, physical and social well-being, not only the absence of illness, diseases or abnormalities (The Dictionary of Human Geography 1994:242). Health is the measurement of the functional and/or metabolic efficiency of an organism at both the micro (cellular) and macro (social) level. In the medical field, health is commonly defined as an organism's ability to efficiently respond to challenges (stressors) and effectively restore and sustain a 'state of balance' known as 'homeostasis' (Alliance-Health 2013). Health is, therefore, a dynamic state on the wellness-illness continuum, ranging from high-level wellness, to states of illness/premature death. Health also implies good prospects for continued survival (Miller 2005). Health is a general term which includes modern/traditional/alternative/diagnostic medicines, fitness, yoga and exercise, nutrition and diet, beauty-care, spas, saunas, aromatherapy, massage services, surgery, dentistry, sun and sea bathing, skincare, and in general, anything that makes one's body 'healthier' and 'fitter'.

Today, the attainment of the highest possible level of health and well-being has become a fundamental human right (World Health Organization 2012). People are living longer and better. Diseases and sicknesses are undesirable. Screening for