Abstract

With the ASEAN Economic Community coming into existence at the end of 2015, deeper integration of health services and trade in health services is likely. This study focuses on Malaysia, Singapore and Thailand and aims at (i) comparing the present role of the private hospital sector in the overall health system and for medical tourism in particular as well as the environment in which it operates, (ii) understanding the impact of medical tourism on destination countries’ health systems, and (iii) examining company strategies related to medical tourism of major health care companies in Malaysia, Singapore and Thailand, the focus being on foreign direct investment. Data are collected through a review of available research, policy documents and secondary data as well as through in-depth interviews conducted with experts in Malaysia, Thailand and Singapore. The comparison of private hospitals indicates that there seems to be excess capacity which could be harnessed and that the private sector appears interested in contributing to a larger extent to medical education which could help ease shortages of medical professionals. While the impact of medical tourism on national health systems in the three countries is debated in the literature, there is a lack of rigorous analysis and the evidence to date is unclear. Although some governments have expanded their role in the “private or paying” healthcare market segment, the strategies of large private hospitals vis-à-vis the public system have remained largely unchanged. This study concludes that it is important to understand the business strategies of major health care companies in order to expand the role of the private sector in addressing key challenges in the healthcare sector and assess the need for redistributive financing mechanisms.

Key words: private hospitals, medical tourism, health, ASEAN

JEL codes: I11, I18

1. Introduction

With the Association of Southeast Asian Nations (ASEAN) Economic Community (AEC) coming into existence at the end of 2015, deeper integration of health services and trade in health services is likely, especially since the health sector is one of the identified priority areas under the ASEAN Framework Agreement on Services (AFAS). Within ASEAN and the ASEAN partner countries in Northeast Asia (i.e. China, Japan and South Korea – ASEAN+3), Malaysia, Singapore and Thailand are major destinations for medical tourism. According to estimates by UN ESCAP (2009), 1,250,000 international patients were treated in Thailand in 2005, compared with 400,000 in Malaysia and 370,000 in Singapore. In the absence of a universally accepted definition of what a medical tourist is, however, estimates of the

1 Corresponding author. Faculty of Economics, Chulalongkorn University, Phayathai Road, Bangkok 10330. E-mail: chantal.h@chula.ac.th.
number of medical tourists and medical tourism-related earnings vary substantially (Pocock and Phua 2011 among others). For Thailand, medical tourism revenues are estimated to reach around THB 70 billion (approximately USD 2.4 billion) in 2012, of which THB 2.5 billion (approximately USD 86.2 million) would come from ASEAN patients (Kasikorn Research 2012). Foreign patients spent USD 90.5 million on medical services and items in Malaysia in 2008 and USD 725.8 million in Singapore (Chee 2010).

Medical tourism falls under mode 2 of the General Agreement of Trade in Services (GATS). The GATS distinguishes four modes of supply, (i) mode 1: cross-border supply, (ii) mode 2: consumption abroad, (iii) mode 3: commercial presence and (iv) mode 4: temporary movement of natural persons. Deeper integration of ASEAN countries is going to intensify the intertwined dynamics across the four modes. Foreign direct investment (FDI) by regional health care companies for example has and is likely to accelerate further (mode 3), possibly intensifying external brain drain and brain circulation across the region (mode 4) and attracting patients from abroad (mode 2). Commercial presence is typically one of the most controversial modes of supply given that it “is likely to challenge the public-health nature of many health systems” (Smith 2004: 2314). Trade policy goals are consequently directly competing with health policy goals underling the need for policy coherence (Pachanee and Wibulpolprasert 2006).

The three countries are interesting comparative examples since they are quite different in terms of key economic, demographic and health indicators as shown in Table 1. Singapore, a small high income country, performs better across most dimensions, but like Thailand faces the challenge of meeting the health care demands of a rapidly aging population. The fertility rate is higher and the old age dependency ratio is lower in Malaysia than Singapore and Thailand.

<table>
<thead>
<tr>
<th>Country</th>
<th>Income level</th>
<th>GNI per capita, PPP (current international $)</th>
<th>Population</th>
<th>Life expectancy at birth, total (years)</th>
<th>Mortality rate, infant (per 1,000 live births)</th>
<th>Fertility rate, total (births per woman)</th>
<th>Dependency ratio, old (% of working-age pop)</th>
<th>Health expenditure, total (% of GDP)</th>
<th>Health expenditure, private (% of GDP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Malaysia</td>
<td>Upper middle income</td>
<td>15,190</td>
<td>28,859,154</td>
<td>74</td>
<td>5.40</td>
<td>2.64</td>
<td>7.55</td>
<td>4.39</td>
<td>2.65</td>
</tr>
<tr>
<td>Singapore</td>
<td>High income: non-OECD</td>
<td>59,790</td>
<td>5,183,700</td>
<td>82</td>
<td>2.10</td>
<td>1.15</td>
<td>12.72</td>
<td>3.96</td>
<td>2.30</td>
</tr>
<tr>
<td>Thailand</td>
<td>Upper middle income</td>
<td>8,390</td>
<td>69,518,555</td>
<td>74</td>
<td>11.20</td>
<td>1.58</td>
<td>12.86</td>
<td>3.88</td>
<td>1.04</td>
</tr>
</tbody>
</table>

Data source: (World Bank, World Development Indicators)

The for-profit private sector is generally the main healthcare provider for medical tourists. While a large private sector exists in all three countries, its role in the overall health system is different in terms of delivery and financing, although between 70 and 80 per cent of hospital beds are generally provided by the public sector.

In Thailand, the proportion of hospital beds under the Thai Ministry of Public Health (MoPH) was 67 per cent and the share of private hospitals 21 per cent in 2008 (Ministry of Public Health 2011). The Social Security Office (the managing body of the Social Security Scheme, which covers 12 per cent of the Thai population) and the National Health Security Office (the managing body of the Universal Coverage Scheme (UCS), which covers 76 per cent of the Thai population) contract with private providers. Private provider participation in the
UCS has remained low though. While the number of contracted private clinics has increased, the number of contracted private hospitals has, however, decreased over the past years. Malaysia and Singapore, on the other hand, both inherited public health systems from the British. In Malaysia, the population is nowadays served by both public and private healthcare providers, although 74 per cent of hospital beds are public (WHO WPRO 2011 Revision). Only around 20 per cent of hospital care but 80 per cent of primary health care services are provided by the private sector in Singapore (WHO WPRO n.d.).

Private health expenditures in per cent of GDP stood in Thailand, where universal healthcare coverage was achieved in 2002 (Ministry of Public Health 2011), at only 1.04 per cent compared to 2.65 per cent in Malaysia and 2.30 per cent in Singapore as shown in Table 1. Singapore has traditionally placed a strong emphasis on individual responsibility (Lim 2004), while in Malaysia a “1Care for 1Malaysia” concept has only recently been proposed (WHO WPRO n.d.). General government expenditure on health as per cent of total expenditure on health was 75 per cent in Thailand, compared with 45 per cent in Malaysia and 42 percent in Singapore (WHO WPRO 2011 Revision).

A large body of literature examines the role of the private sector in health and two broad strands of the literature can be distinguished. The first strand looks at the size, scope, growth and structure of the private sector or a segment thereof and its implications for national health systems, while the second strand of the literature deals with specific tools that exist to engage the private sector such as contracting, franchising and social marketing to achieve national health systems goals (Barnes, et al. 2009, World Bank 2003 among others).

Arunanondchai and Fink (2007), who belong to the first category, review the broader state of healthcare across ASEAN, including the private sector in health, and analyse patterns of and barriers to trade in health services. While the implications from trade in health services are perceived to be manifold and subject to a lively debate in the literature, a trade-off between increased revenues from medical tourism versus increased inequality domestically emerges as a main theme from the discussion in Arunanondchai and Fink (2007), with increased inequalities mainly driven by shortages of health personnel. The authors highlight four domestic policy challenges, including the development of adequate human resources and regulatory capacity in the healthcare sector. Human resources and regulatory capacity in the healthcare sector are also explicit components in the conceptual framework proposed in Pocock and Phua (2011) to assess policy implications of medical tourism for health systems, which is based on the health systems functions of governance, delivery, financing, human resources and regulation.

This study seeks to shed further light on the implications of medical tourism by conducting a comparative study of private hospital sectors, focusing on medical tourism. This type of comparison is useful for highlighting similarities and dissimilarities across the three countries, which will eventually determine how commercial presence by regional players is integrated into national health systems.

2. Objectives

This study aims at (i) comparing the present role of the private hospital sector in the overall health system and for medical tourism in particular as well as the environment in
which it operates, (ii) understanding the impact of medical tourism on destination countries’ health systems, and (iii) examining company strategies related to medical tourism of major health care companies in Malaysia, Singapore and Thailand, the focus being on FDI.

3. Scope

To assess the present role of the private hospital sector in the overall health system, this study focuses on indicators such as size, scope, growth and structure across three ASEAN destination countries, Malaysia, Singapore and Thailand. Identification of constraints to and support of private sector participation in the overall health system, on the other hand, allows assessing the current business environment for the private health sector. The literature on the impact of medical tourism in the three countries on the key variables identified in Pocock and Phua (2011) is reviewed across the health systems functions of governance, delivery, financing, human resources and regulation on which their framework is based, while the analysis of company strategies of major health care companies focuses on (i) Parkway Pantai Limited, (ii) Khazanah Nasional Berhad, (iii) Bangkok Hospital Group and (iv) Bumrungrad Hospital, four dominant players in ASEAN.

4. Methodology

Methods employed include reviewing available research, policy documents and secondary data as well as conducting in-depth interviews (IDIs) with experts in Malaysia, Thailand and Singapore. Triangulation was used to validate the data. IDIs were recorded and coded to facilitate the thematic analysis. Analogous Lethbridge (2011) the business strategies are analysed using Porter’s Five Forces approach of comparative advantage, which is a business strategy framework. While rather uncommon in health care industries, several studies employ business research methods (Lethbridge 2011, Breedveld, Meijboomb and de Roo 2006 among others use Porter’s Five Forces approach, while the studies in Tullao Jr. and Hin 2011 employ SWOT analyses). The analysis of companies’ strategies is important as it allows anticipation of factors that may jeopardise healthcare delivery in the future, especially in countries where the role of the private sector is expanding.

5. Background information and literature review

i. Definitions and concepts

Medical tourism data is often gauged by compiling information about the number of international or foreign patients treated. Rosenmöller, et al. (2006) identify five types of international patients, (i) those who need to seek health care services abroad while on holiday in a foreign country, (ii) international retirement migrants who seek health care services in the foreign country in which they reside, (iii) international retirement migrants who seek health care services in the foreign country in which they reside.

---

2 Appendix 1 contains the guideline questions for the IDIs. A total of 7 experts from academia (4), industry (2) and a consulting firm (1) were invited to participate. IDIs were conducted by the researchers in March 2013 in Malaysia (2), Singapore (3) and Thailand (2). Experts from academia were chosen based on their research interests and publications in this field.

3 This category should be expanded to also include expatriates, i.e. individuals who are working and residing in a foreign country.
(iii) those who are sent abroad to receive health care services by their own health system (vi) those who travel to a neighbouring country with the purpose of consuming health care services, where home and destination regions share common borders and close ties and the destination country may in fact be their country of origin, and (v) those who travel to another country with the purpose of consuming health care services, where the foreign country is not their country of origin. All five types would count as international patients, although typically only those belonging to the fifth category (and perhaps the fourth category) are considered medical tourists (Lunt and Carrera 2010, Smith, Álvarez and Chanda 2011 among others). Consumers may solely travel with the purpose of receiving health care services or combine their travel with an enjoyable vacation element as mentioned in Deloitte (2008). Hence, medical tourism is related to the broader concept of health tourism (Lunt, Smith, et al. 2011).

Consequently, services provided to international patients are often compiled by including wellness services as a preventive health service (Carabello 2008 among others). Others, however, conceptually exclude wellness services (Smith, Álvarez and Chanda 2011). Examples of health care services sought after by medical tourists are cosmetic surgery, dental treatment, cardiac surgery, orthopaedic surgery, bariatric surgery, eye surgery, reproductive treatment, organ transplantation and medical checkups (Smith, Álvarez and Chanda 2011; Lunt, Smith, et al. 2011), the majority of which are not acute and life-threatening, but mainly elective. In addition, these services are often not covered by medical insurance implying that consumers choose to pay out-of-pocket.

ii. Medical tourism value chain

The term value chain generally refers to activities within and around an organisation, where a distinction is made between primary and support activities (Porter 2004). A value chain analysis can then be used to assess the organisation’s competitive position and how value accrues to the various stakeholders.

The value chain framework was adapted to the tourism industry by Poon (1993, cited in Yilmaz and Bititci (2006)). Yilmaz and Bititci (2006) in addition introduced a customer-orientation and developed a value chain oriented performance management and measurement framework. Their integrated tourism value chain is divided into four phases, win order (purchase of travel package (which involves tour operators or outbound travel agents) or individual travel), pre-delivery support (provision of for example visa and information about the destination by the tour operator or outbound travel agent), delivery (consumption of tourism product) and post-delivery support (measurement of consumer satisfaction).

Only some studies applied the value chain framework to the medical tourism industry. Drawing on the decision-making process of patients seeking treatment abroad described in Deloitte (2008), the Indian Institute of Tourism and Travel Management (2011) proposes a three phase value chain, consisting of pre-procedure stage, procedure stage and post-procedure stage. These phases are comparable to those in Yilmaz and Bititci (2006), with the exception of the win order stage which is part of the pre-procedure stage. During the pre-procedure phase, consumers obtain information through various channels (provider, personal contacts, media/internet, insurance agent (health and travel insurance), travel agents, medical tourism facilitators). The pre-procedure phase ends once the consumer has made a decision. The most important phase is the procedure stage, which typically starts when the consumer reaches the destination country and includes all ancillary services like for example airport transfer and accommodation until the medical procedure has been
completed. Post operative and follow-up care are delivered in the post-procedure phase. While the former is typically delivered in the destination country, the latter is often consumed in the home country.

Major stakeholders thus include patients, providers, insurance agents, medical tourism facilitators, transport providers, tour operators, government agencies and hotel groups.

### iii. Private hospitals in Malaysia, Singapore and Thailand

Lunt, Smith, et al. (2011) argue that the demand for medical tourism is generally driven by globalisation and the increased patient choice, which includes the main factors identified in Glinos, et al. (2010), namely familiarity with service providers, availability of services (including services that are illegal in the home country such as for example euthanasia services), perceived quality of care, cost and payment modalities. According to Cormany and Baloglu (2011: 710) “it is generally asserted, but as of yet unproven, that the driving motivator for such travelers is cost savings”.

#### TABLE 2 PRICES OF SELECTED MEDICAL INTERVENTIONS

<table>
<thead>
<tr>
<th>Procedure</th>
<th>USA</th>
<th>Malaysia</th>
<th>Singapore</th>
<th>Thailand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart bypass</td>
<td>130,000</td>
<td>9,000</td>
<td>18,500</td>
<td>11,000</td>
</tr>
<tr>
<td>Heart valve replacement</td>
<td>160,000</td>
<td>9,000</td>
<td>12,500</td>
<td>10,000</td>
</tr>
<tr>
<td>Hip replacement</td>
<td>43,000</td>
<td>10,000</td>
<td>12,000</td>
<td>12,000</td>
</tr>
<tr>
<td>Knee replacement</td>
<td>40,000</td>
<td>8,000</td>
<td>13,000</td>
<td>10,000</td>
</tr>
<tr>
<td>Spinal fusion</td>
<td>62,000</td>
<td>6,000</td>
<td>9,000</td>
<td>7,000</td>
</tr>
</tbody>
</table>


The data in Table 2 show that prices of selected medical interventions are lower in Malaysia and Thailand than Singapore although no comparative data of ancillary cost exist. Services provided to international patients are mostly delivered at large hospitals to ensure clinical excellence, although specialised clinics for example for dental services and eye treatment also exist.

In all three countries, large hospitals that target medical tourists are primarily from the private sector, with Singapore, where public hospitals are also Joint Commission International (JCI) accredited (Phua and Pocock 2011) and offer their services to medical tourists, being somewhat of an exception. As noted in Phua and Pocock (2011), however, public hospitals mainly provide services to Singaporeans. Hospitals serving medical tourists often belong to large holding companies, although some hospitals operate on a stand-alone basis like for example Thailand’s Bumrungrad Hospital.

In Malaysia, hospital services are delivered through public and private hospitals. The private health sector, largely left to its own since its emergence in the 1980s when privatization was introduced in Malaysia, has been growing very fast and in 2010, there were 254 private hospitals with 13,576 beds (WHO WPRO 2011 Revision) compared to 209 private hospitals with 11,689 beds in 2008 (Ministry of Health Malaysia 2010). The growth of private hospitals has inter alia been driven by increasing affluence of the population, which has increased patient demands and expectations, and the growth in private health insurance (Ministry of Health Malaysia 2010).  

---

Today, unlike the past, almost all private hospitals are for-profit hospitals. A few hospitals like for example the National Heart Institute, the University of Malaya Medical Centre and the National University of Malaysia Hospital were corporatized (Phua and Barraclough 2011). Private hospitals that serve medical tourists are listed in Table 2.

TABLE 3 HEALTH TOURISM HOSPITALS5 IN MALAYSIA

<table>
<thead>
<tr>
<th>Medical tourism hospitals with more than 100 beds</th>
<th>Hospital beds</th>
<th>Market share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assunta Hospital</td>
<td>344</td>
<td>4</td>
</tr>
<tr>
<td>Gleneagles Hospitals*</td>
<td>543</td>
<td>7</td>
</tr>
<tr>
<td>Hospital Fatimah</td>
<td>226</td>
<td>3</td>
</tr>
<tr>
<td>Island Hospital</td>
<td>192</td>
<td>2</td>
</tr>
<tr>
<td>KPJ Hospitals</td>
<td>1,957</td>
<td>23</td>
</tr>
<tr>
<td>Lam Wah Ee Hospital</td>
<td>442</td>
<td>5</td>
</tr>
<tr>
<td>Loh Guan Lye Specialists Centre</td>
<td>265</td>
<td>3</td>
</tr>
<tr>
<td>Mahkota Medical Centre</td>
<td>356</td>
<td>4</td>
</tr>
<tr>
<td>National Heart Institute (Institut Jantung Negara)</td>
<td>424</td>
<td>5</td>
</tr>
<tr>
<td>Normah Medical Specialist Centre</td>
<td>130</td>
<td>2</td>
</tr>
<tr>
<td>Pantai Hospitals*</td>
<td>1,482</td>
<td>18</td>
</tr>
<tr>
<td>Penang Adventist Hospital</td>
<td>276</td>
<td>3</td>
</tr>
<tr>
<td>Prince Court Medical Centre</td>
<td>212</td>
<td>3</td>
</tr>
<tr>
<td>Puteri Specialist Hospital</td>
<td>158</td>
<td>2</td>
</tr>
<tr>
<td>Putra Specialist Hospital</td>
<td>225</td>
<td>3</td>
</tr>
<tr>
<td>Sime Darby Medical Centre Subang Jaya</td>
<td>393</td>
<td>5</td>
</tr>
<tr>
<td>SMC HealthCare Sdn Bhd</td>
<td>175</td>
<td>2</td>
</tr>
<tr>
<td>Sunway Medical Centre</td>
<td>185</td>
<td>2</td>
</tr>
<tr>
<td>Taman Desa Medical Centre</td>
<td>128</td>
<td>2</td>
</tr>
<tr>
<td>Tung Shin Hospital</td>
<td>238</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>8,351</td>
<td>100</td>
</tr>
</tbody>
</table>


The KPJ hospitals and the Parkway Pantai hospitals account for around 30 per cent of all private hospital beds (as of 2008). While KPJ Healthcare Berhad, with only one specialist hospital subsidiary in Indonesia (KPJ Healthcare Berhad 2011), is more focused on serving the domestic market, Parkway Pantai Limited, which is part of the IHH Healthcare Berhad Group, has or has planned operations and investments in Singapore, Malaysia (Gleneagles Hospitals and Pantai Hospitals), China and Hong Kong, India, Vietnam and Brunei (Parkway Pantai Limited 2013). In comparison, 33,211 hospital beds were made available in 131 public general hospitals and 4,582 in 6 public specialised hospitals as of 2010 (WHO WPRO 2011 Revision)6. Most medical tourists seeking treatment in Malaysia are from Indonesia and Singapore.

In 2010, 22,429 physicians (68 per cent) worked in the public sector and 10,550 (32 per cent) in the private sector. However, 60 per cent of specialists were in the private sector as of 2008, reflecting internal brain drain from the public to the private sector (Ministry of Health Malaysia 2010). As noted by Dahlui and Aziz (2011), public and private hospitals compete for health professionals, especially specialists, and public hospitals have invited private specialists to jointly treat complex cases as a response to the shortage of specialists. In addition, university hospitals were allowed to operate commercial private wings (Dahlui and Aziz 2011). The permission to run commercial private wings potentially causes conflicts of interest as medical professionals may give preference to patients in commercial private wings. Phua and Barraclough (2011) state that the internal brain drain is one of the unintended consequences of privatization as specialists can earn higher income in the private

---

5 Health and medical tourism hospitals in Malaysia (Table 3) and Thailand (Table 5) were identified based on internet portals (e.g. http://www.hospitals-malaysia.org, www.mhtc.org.my and http://www.thailandmedicaltourismcluster.org).

6 Data on the number of first-level referral hospitals are not available.
sector. In addition, urban-rural disparities exist as most private hospitals are located in urban areas. Since 1992, when the International Medical University (IMU) was established in the form of a partner medical school model, the private sector has been involved in medical education.

TABLE 4 MEDICAL TOURISM HOSPITALS IN SINGAPORE

<table>
<thead>
<tr>
<th>Medical tourism hospitals with more than 100 beds</th>
<th>Hospital beds</th>
<th>Market share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alexandra Hospital (public)</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Changi General Hospital (public)</td>
<td>790</td>
<td>7</td>
</tr>
<tr>
<td>Gleneagles Hospital*</td>
<td>380</td>
<td>3</td>
</tr>
<tr>
<td>Institute Of Mental Health (IMH) (public)</td>
<td>2,000</td>
<td>17</td>
</tr>
<tr>
<td>Khoo Teck Puat Hospital (public, established in 2008)</td>
<td>550</td>
<td>5</td>
</tr>
<tr>
<td>KK Women's And Children's Hospital (public)**</td>
<td>830</td>
<td>7</td>
</tr>
<tr>
<td>Mount Alvernia Hospital (non-profit)</td>
<td>300</td>
<td>3</td>
</tr>
<tr>
<td>Mount Elizabeth Hospital*</td>
<td>505</td>
<td>4</td>
</tr>
<tr>
<td>Mount Elizabeth Novena Hospital*</td>
<td>333</td>
<td>3</td>
</tr>
<tr>
<td>National Cancer Centre Singapore (public)**</td>
<td>1,500</td>
<td>13</td>
</tr>
<tr>
<td>National Heart Centre Singapore (public)**</td>
<td>186</td>
<td>2</td>
</tr>
<tr>
<td>National University Hospital (public)</td>
<td>881</td>
<td>8</td>
</tr>
<tr>
<td>Parkway East Hospital*</td>
<td>123</td>
<td>1</td>
</tr>
<tr>
<td>Raffles Hospital</td>
<td>150</td>
<td>1</td>
</tr>
<tr>
<td>Singapore General Hospital (public)**</td>
<td>1,500</td>
<td>13</td>
</tr>
<tr>
<td>Tan Tock Seng Hospital (public)*****</td>
<td>1,200</td>
<td>10</td>
</tr>
<tr>
<td>Thomson Medical Centre</td>
<td>190</td>
<td>2</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>11,628</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>


NB. Excluding 8 community hospitals (mainly rehabilitation, geriatric care and coalescing care) and four national specialist centres.

*Parkway Pantai Limited, **SingHealth Academic Healthcare Cluster, ***National Healthcare Group

The Singaporean health care delivery system also comprises public and private providers. While the private sector provides around 80 per cent of primary health care services and the public sector around 20 per cent, almost the opposite is true for hospital services (WHO WPRO n.d.). In Singapore, public sector hospitals are corporatized units, under which the structure of the private sector is combined with public ownership. Some public hospitals belong to one of the two clusters, Singapore Health Services (SingHealth) and National Healthcare Group as shown in Table 4, which were established to reduce duplication and increase competition (Reisman 2009). Private hospitals that operate in Singapore are smaller (20 to 345 beds) than the public hospitals (185 to 2,010 beds) (Ministry of Health Singapore 2012). As of 2012, there were 25 hospitals and specialty centres (Ministry of Health Singapore 2012). The 15 public hospitals included 6 general hospitals, 2 specialised hospitals, 6 national specialty centres for cancer, cardiac, eye, skin, neuroscience, dental care and a medical centre for multiple disciplines and accounted for about 85 per cent of total hospital beds (Ministry of Health Singapore 2012). There are five ward types, namely A, B1, B2+, B2 and C. Beds in C and B2 wards in public hospitals (81 per cent of total beds) are heavily subsidised (for example C ward: 80 per cent, B2 ward: up to 65 per cent (Reisman 2009)), while beds in B1 wards are less subsidised (up to 20 per cent of cost) and beds in A class wards (i.e. private or paying beds) are not subsidised (Ministry of Health Singapore 2012, Lim 2004). With the gap between the different wards closing over time, a means-test for B2 and C wards to determine the charge was introduced in 2009 to avoid increased utilisation of these subsidised wards by the better-off. Since then, more patients have opted for beds in private hospitals or A-class wards. Bed occupancy rates are on average very high in public hospitals (about 90 per cent) and much lower in private hospitals as reported in

---

7 See Harding and Preker (2000) for a comparison of budgetary organisations, autonomized organisations, corporatized organisations and privatised organizations.
Reisman (2009), indicating excess capacity in private hospitals. The two main private sector healthcare groups are Parkway Pantai Limited, which also owns the Parkway College of Nursing and Allied Health (Parkway College), which started in 2008, and the Raffles Medical Group. According to Reisman (2010), around 70 percent of foreign patients are from within ASEAN, especially from Indonesia, and about 30,000 patients (in 2000 there were 150,000 foreign patients in total) came for high-end interventions such as cancer treatment and open heart surgery. In light of the medical tourism value chain, public and private facilities manage not only the procedure stage, but also pre-procedure and post-procedure stages. SingHealth, for example, has a network of appointed medical associates in the region (e.g. Square Hospitals Limited in Bangladesh) to provide services such as appointments, referrals, translator assistance, accommodation bookings in Singapore and general visitors’ information (SingHealth 2013). Similarly, Parkway Pantai Limited operates more than 30 patient assistance centres around the world (Parkway Pantai Limited 2013).

In 2009, 988 public (11 medical school hospitals, 97 general hospitals, 61 specialised hospitals, 25 regional hospitals, 734 community hospitals and 60 hospitals under other agencies) and 322 private hospitals were operating in Thailand. While the number of hospitals under the MoPH increased from 39.3 per cent of all hospitals in 1973 to 67.1 per cent in 2008, the proportion of private hospitals and hospitals under other agencies (i.e. other ministries, local agencies and state enterprises) has been declining since 1973 (Ministry of Public Health Thailand 2011: Figure 6.35). When considering the proportion of hospital beds by agency, however, the proportion of hospital beds under the MoPH has remained rather stable between 60 to 70 per cent. The proportion of hospital beds in private hospitals on the other hand increased from 7.4 per cent in 1973 to 20.6 per cent in 2008 (Ministry of Public Health Thailand 2011: Figure 6.36). The number of private hospitals increased substantially in the early 1990s given financial liberalisation (especially in the form of the establishment of the Bangkok International Banking Facilities) and subsequent capital inflows. In 1994 alone, 51 new private hospitals were established (Ministry of Public Health Thailand 2011: Figure 6.34). Many of these hospitals had to file for bankruptcy following the floating of the Thai Baht in 1997 and the subsequent financial crises across the region. 217 private hospitals were closed down between 1998 and 2003, 70 of which in 2003 alone (Ministry of Public Health Thailand 2011: Figure 6.34). Based on 2008 data, hospitals under the municipalities and the MoPH had the highest bed-occupancy rates (84 per cent and 83 per cent respectively), while those under the Ministry of Defence (bed-occupancy: 48 per cent) and independent agencies (bed-occupancy: 54 per cent) as well as the private sector (bed-occupancy: 60 per cent) had the lowest bed occupancy rates (Ministry of Public Health Thailand 2011: Figure 6.39). 21 out of 31 large hospitals (with more than 200 beds) were located in Bangkok in 2009 and in 2008 65 per cent of hospitals (46 per cent of hospital beds) in Bangkok were private, but only 11 per cent of hospitals (9 per cent of hospital beds) in for example Thailand’s poorest region, the Northeast (Ministry of Public Health Thailand 2011: Table 6.6, Figures 6.37, 6.38). According to Janjaroen and Supakankunti (2003), market concentration of private hospitals is low in Bangkok and its neighbouring province Samut Prakan, moderate in 26 provinces and high in 38 provinces.

Private hospitals can be categorised into three groups, namely those whose revenues exclusively come from out-of-pocket paying affluent Thai patients and medical tourists (Tier 1), those whose revenues come from out-of-pocket paying patients and disease-specific contracting with the NHSO (Tier 2), and those that are
mainly paid by the Social Security Office and/or the National Health Security Office (Tier 3).

Foreign entry into the private hospital sector has been rather limited. Out of 429 private hospitals surveyed by the National Statistical Office (NSO) in 2007, only 8.9 per cent had foreign owners, of which 34 per cent held shares in excess of 10 per cent (NSO 2007: Table 5). Most hospitals with foreign owners, who are mainly from Japan, Singapore and China, have more than 100 beds and are located in Bangkok (NSO 2007: Tables 5, 6). About 55 per cent of private hospitals provided inpatient services and 64 per cent outpatient services to foreigners (NSO 2007: Tables 8, 9). A total of 14 hospitals/holding companies were listed on the Stock Exchange of Thailand as of March 2013 (Stock Exchange of Thailand n.d.).

### TABLE 5 MEDICAL TOURISM HOSPITALS IN THAILAND

<table>
<thead>
<tr>
<th>Medical tourism hospitals with more than 100 beds</th>
<th>Hospital beds</th>
<th>Market share (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bumrungrad Hospital (BGH: 23.94%)</td>
<td>538</td>
<td>4</td>
</tr>
<tr>
<td>BNH Hospital*</td>
<td>144</td>
<td>1</td>
</tr>
<tr>
<td>Yanhee Hospital</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Chaophya Hospital</td>
<td>200</td>
<td>2</td>
</tr>
<tr>
<td>Saint Louis Hospital</td>
<td>500</td>
<td>4</td>
</tr>
<tr>
<td>B.Care Medical Center</td>
<td>150</td>
<td>1</td>
</tr>
<tr>
<td>Bangkok Adventist Hospital (Mission Hospital)</td>
<td>186</td>
<td>1</td>
</tr>
<tr>
<td>Bangkok Hospitals (15)*</td>
<td>2,494</td>
<td>20</td>
</tr>
<tr>
<td>Samitivea Hospitals (3)*</td>
<td>825</td>
<td>7</td>
</tr>
<tr>
<td>Bangkok Hospital</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Bangamod Hospital</td>
<td>200</td>
<td>2</td>
</tr>
<tr>
<td>Camillian Hospital</td>
<td>120</td>
<td>1</td>
</tr>
<tr>
<td>Nakornthon Hospital</td>
<td>250</td>
<td>2</td>
</tr>
<tr>
<td>Paolo Memorial Group (4)*</td>
<td>697</td>
<td>5</td>
</tr>
<tr>
<td>Phayathai Group of Hospitals (4)*</td>
<td>1,097</td>
<td>9</td>
</tr>
<tr>
<td>Piyavate Hospital (public)</td>
<td>300</td>
<td>2</td>
</tr>
<tr>
<td>Mongkut Wattana General Hospital</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td>Chaophya Hospital</td>
<td>250</td>
<td>2</td>
</tr>
<tr>
<td>Praram 9 Hospital</td>
<td>160</td>
<td>1</td>
</tr>
<tr>
<td>Saint Louis Hospital</td>
<td>500</td>
<td>4</td>
</tr>
<tr>
<td>Ramkhamhaeng Hospital* (BGH: 38.24%)</td>
<td>300</td>
<td>2</td>
</tr>
<tr>
<td>Chiang Mai Ram and Lanna Hospital Group (RAM: 42.89)</td>
<td>609</td>
<td>5</td>
</tr>
<tr>
<td>Sikarin Public Company Limited (Sikarin Hospital, Batarin hospital)</td>
<td>335</td>
<td>3</td>
</tr>
<tr>
<td>Synphaet Hospitals (RAM: 32.95% via Synphaet Co. Ltd.)</td>
<td>185</td>
<td>1</td>
</tr>
<tr>
<td>Thainakarin Hospital</td>
<td>190</td>
<td>1</td>
</tr>
<tr>
<td>Vithavadi Medical Centre Hospital (RAM: 10.67%)</td>
<td>350</td>
<td>3</td>
</tr>
<tr>
<td>Vejthani Hospital</td>
<td>500</td>
<td>4</td>
</tr>
<tr>
<td>McCormick Hospital</td>
<td>400</td>
<td>3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12,680</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>


The dominant players in the medical tourism market as shown in table 5 are the Bangkok Dusit Medical Services Group (BGH), with a market share in terms of hospital beds of 42 per cent, followed by the Ramkamhaeng Hospital Group and the Bumrungrad Hospital. Hospital beds, however, are a very rough estimate of market power, as these beds are not exclusively occupied by medical tourists, but to a large extent are also used to serve affluent Thai patients. Bumrungrad Hospital is generally viewed as capturing the largest share of medical tourists, especially from the United Arab Emirates, Oman, Kuwait and Myanmar, although comparative statistics do not exist. According to Bumrungrad’s website, the hospital works with international

---

8 Note that the number of private hospitals exceeds the number reported in Ministry of Public Health Thailand (2011), even when accounting for establishments (1, 11 and 3 in 2007, 2008 and 2009 respectively) and closures (13, 14 and 11 in 2007, 2008 and 2009 respectively) of private hospitals as reported in Ministry of Public Health Thailand (2011).
referral offices in 12 countries\(^9\), has customer service representatives / translators who can communicate in 24 languages and a medical coordination office that also handles follow-up care planning. Major shareholder of the Bumrungrad Hospital is the BGH (23.94 per cent). Besides, BGH owns the Royal Hospital Group in Cambodia, while Bumrungrad Hospital does not have any affiliated hospitals overseas. It is noteworthy that the Government of Singapore Investment Corporation also holds a 2 per cent stage in Bumrungrad Hospital.

The size of the private hospital sector is similar in Malaysia (26 per cent of hospital beds) and Singapore (27 per cent of hospital beds), but somewhat smaller in Thailand (21 per cent of hospital beds). Private hospitals are on average smaller than public hospitals, with lower average occupancy rates, indicating excess capacity. In all three countries, most private hospitals are for profit. The 1997 Asian financial crisis was a turning point for medical tourism in all three countries. In Thailand and Malaysia it started medical tourism, while in Singapore it highlighted the risks associated with relying on patients from the region (Leng 2010, Ministry of Public Health Thailand 2011). Private hospitals in Malaysia and Singapore are much more active in Asian countries through FDI compared with those in Thailand. This can be explained by the fact that most medical tourists travelling to Malaysia and Singapore are still from within the region, reflecting linkages across the four modes of supply, whereas institutions in Thailand serve patients from other parts of the world. What also becomes apparent is the emerging role of the private sector in the production of medical professionals through the establishment of private medical schools, which has progressed fastest in Malaysia. In addition, higher education institutions and hospitals in Malaysia and Singapore have increasingly built strategic alliances with partners abroad, such as for example the partnerships between one the world’s most advanced cancer centres, the Memorial Sloan-Kettering Cancer Centre and facilities in Singapore (Yap, Chen and Nones 2008).

iv. Business environment in which private hospitals in Malaysia, Singapore and Thailand operate

According to the Global Competitiveness Report 2012-2013 (2012), which ranks 144 countries based on a 12-dimensional global competitiveness index, Singapore is the second-most competitive economy in the world, followed by Malaysia (rank 25) and Thailand (rank 38). While The Global Competitiveness Report 2012-2013 (2012) classifies Singapore as an innovation-driven economy, Thailand is categorised as an efficiency-driven economy while Malaysia is transitioning between these two stages of economic development. Singapore, which traditionally has placed a strong emphasis on education, performed well across all subindices and its public and private institutions are considered the best in the world. Surprisingly, given Malaysia’s focus on information and communications technology (ICT), insufficient ability to adopt technologies is seen as one of the major problems. Impeding factors in Thailand are reported to include political and policy instability, excessive red tape, pervasive corruption, security concerns, and uncertainty around property rights protection, poor public health and basic education standards (The global competitiveness report 2012-2013 2012). This relative ranking is confirmed by the World Bank (2013), which examines 11 indicators to assess how easy or difficult it

---

\(^9\) These 12 countries are Australia, Bahrain, Bangladesh, Cambodia, Ethiopia, Hong Kong, Indonesia, Mongolia, Myanmar, Nepal, Oman, Vietnam.
is to do a small- or medium-sized business in a country. Singapore is ranked first, Malaysia twelfth and Thailand eighteenth.

Regarding medical tourism, several barriers to trade in health services have been identified in the literature and the major obstacles include non-portability of health insurance (mode 2), entry visas and work permits (modes 2, 3 and 4), professional and premises licenses (modes 3 and 4) and investment permits (mode 3) (UN ESCAP 2009 among others).

Singapore has generally been open to trade in health services and entry barriers are very low, with the major barrier being professional licensing. Foreign doctors who wish to practice in Singapore must possess qualifications that are recognised by the Singapore Medical Council, or else seek temporary registration (Singapore Medical Council n.d.). Singapore adopted an integrated-care approach in light of population ageing and strongly supports research and development and strategic partnerships to drive innovation (Singapore Economic Development Board n.d.). This focus on quality and value-added services is quite different from the approaches in Malaysia and Thailand and reflects that Singapore is generally competing on a global rather than a regional basis. However, most medical tourists are from within the region, namely Indonesia and Malaysia (Phua and Pocock 2011).

In Malaysia, the areas of tourism and health are considered part of the 12 National Key Economic Areas (NKEA) and the Malaysian government has established several referral gateways for medical tourists, most of which are from Indonesia (72 per cent) and Singapore (10 per cent), mainly due to the geographical proximity (Dahlui and Aziz 2011). In addition, Singaporeans have been allowed to use Medisave for elective hospitalizations and day surgeries at pre-specified hospitals in Malaysia (Phua and Pocock 2011). Given that Malaysia is predominantly a Muslim country and it’s branding as a global halal hub, the country has increasingly sought to target and attract medical tourists from the Middle East. Since health and tourism belong to the 12 NKEA, the Malaysian government grants various incentives to the medical tourism industry such as tax exemptions and deductions as well as special permits and relatively few barriers to trade exist. Foreign doctors may practice in Malaysia once they have registered with the Malaysian Medical Council and passed a six-month probation during the course of which they have to work under the supervision of a Malaysian specialist (Dahlui and Aziz 2011).

The business environment in Thailand seems relatively more restricted compared to Malaysia and Singapore. Foreign medical professionals are required to have their qualifications approved and pass an examination in Thai language before being able to obtain a license from the Thai Medical Council or other professional councils. According to Wibulpolprasert, et al. (2004) only six foreigners have managed to get a license since 1987, compared to 229 between 1946 to 1986 when the examination was given in English. Other barriers include visa and work permit requirements. In contrast to Malaysia and Singapore, medial tourists travelling to Thailand are not mainly from other ASEAN countries, but from other parts of the world and thus need an entry visa. On mode 3, Janjaroen and Supakankunti (2003) note that to obtain a premise license, investors need approval from various ministries, including the Ministry of Commerce, the Ministry of Industry and the Ministry of Public Health. Although the Board of Investment (BOI) has given various tax incentives to local and foreign investors in healthcare services (Board of Investment Thailand 2012), it started to revise its investment promotion policy in
2011 in cooperation with the National Health Committee given increased opposition to medical tourism (Health Information System Development Office 2012).

v. Policies related to medical tourism in Malaysia, Singapore and Thailand

The Malaysian government has strongly supported the medical tourism industry since the establishment of the inter-ministerial National Committee for Promotion of Medical and Health Tourism (NCPMHT) in 1998, with subcommittees in the areas of promotion, tax incentives, fee packaging, accreditation and advertising (Chee, 2007). The NCPMHT acknowledges that medical tourism spans several sectors and consequently comprises representatives from the Ministry of Health, Ministry of Culture, Arts and Tourism, Tourism Malaysia, Ministry of International Trade and Industry, Malaysian External Trade Development Corporation, Association of Private Hospitals of Malaysia and the Malaysian Association of Tour and Travel Agents (UN ESCAP 2009). In addition, the Malaysian government established the Malaysia Healthcare Travel Council to promote health and medical tourism, while the Malaysia Industrial Development Authority promotes investments in healthcare from foreign investors (Dahlui and Aziz 2011). Both, the 8th Malaysia Plan (2001-2005) and the 9th Malaysia Plan (2006-2010) have explicitly called for the promotion of health tourism (Economic Planning Unit n.d.).

![Table 6 AFAS Schedules of Specific Commitments (8th Package) for Private Hospital Services: Malaysia, Singapore and Thailand](image)

Similarly, government support for the medical tourism industry has also been extremely strong and integrated in Singapore. In 2003, a multi-agency, government-industry partnership, SingaporeMedicine, was established, which is led by the Ministry of Health and involves the Economic Development Board, International

10 In line with the literature medical tourism is considered a subset of health tourism.
Enterprise Singapore and Singapore Tourism Board (SingaporeMedicine n.d.). As noted in Phua and Pocock (2011), however, the Singaporean government has not explicitly announced support of a medical hub policy and support for medical tourism has become less visible in recent years, mainly due to controversial opinions held by the public in light of the potentially conflicting goals of trade and health policies.

The Thai government has also somewhat stepped backed from the explicit medical tourism policy announced in 2004 and its vision that “Thailand will be a world class "Medical Hub."

(Ministry of Public Health Thailand 2009: 17), which implies that in both countries, Singapore and Thailand, medical tourism will be largely driven by the private sector (as suggested for Singapore in Phua and Pocock (2011)), which is quite different from the case of Malaysia. In Malaysia (via NCPMHT and Malaysia Healthcare) and Singapore (via Singapore Medicine), unlike Thailand, the government has been a driving force behind marketing efforts to attract medical tourists (Chee 2010). Like in Malaysia and Singapore, Thailand, nevertheless, recognised that medical tourism requires a multi-sectoral approach, involving several government bodies such as for example the Tourism Authority of Thailand, the Ministry of Foreign Affairs, the Ministry of Commerce and the Ministry of Labour.

Interestingly, Thailand has not restricted trade in private hospital services under modes 1 and 2 as evident from its AFAS schedule of specific commitments (8th package) which is presented in Table 6. None of the three countries made commitments under mode 4 and all three countries imposed foreign ownership restrictions under mode 3, reflecting that mode 3, but also mode 4 are the most controversial modes of supply.

vi. Impact of medical tourism on national health systems in Malaysia, Singapore and Thailand

Numerous studies examine the impact of medical tourism on national health systems, but almost all of these studies are of descriptive nature. The absence of rigorous evidence is mainly due to a lack of data, inter alia given that no uniform definitions of key variables have emerged yet. This review of available evidence is structured around the key variables identified in Pocock and Phua (2011), namely delivery, financing, human resources, governance and regulation.

Delivery

The literature commonly discusses the risk of potential equity implications as serving medical tourists might lead to the existence of a two-tiered health system, with most (low-income) domestic patients relying on basic, poorly equipped public facilities, while high-income domestic patients and medical tourists are treated in sophisticated private facilities as for example reviewed in Smith, Álvarez and Chanda (2011). As the workload at public facilities increases, the quality of services provided there is then likely to decrease further. In addition, it is often asserted that healthcare delivery would be urbanised, thus amplifying the problems caused by a two-tiered health system (Smith, Álvarez and Chanda 2011). A few studies acknowledge that medical tourism might result in technology and best practice

---

11 While Pocock and Phua (2011: 5) write that "the health sector is not covered under the AFAS", AFAS does cover health-related and social services. In addition, Mutual Recognition Agreements (MRAs) on medical practitioners, dental practitioners and nursing services were signed in 2009, 2009 and 2006 respectively (ASEAN n.d.).
transfers, but this positive spill-over effect may be limited to areas relevant for medical tourism such as cosmetic surgery. To date, however, these assertions have relied on anecdotal evidence, which is mainly due to the fact that isolation of the impact of affluent domestic patients versus medical tourists is challenging, given that no universal definition of medical tourists exists.

**Financing**

It is generally acknowledged that medical tourism allows the exporting country to employ a larger number of health professionals and generate more foreign exchange earnings (Pachanee 2009, Janjaroen, Supakankunti and Pongpanich 2007, Smith, Álvarez and Chanda 2011, UN ESCAP 2009 among others), which could in principle be used to cross-subsidise care for domestic patients as for example suggested in Lunt, Smith, et al. (2011). In addition, drawing on the case of Singapore, medical tourism can allow hospitals to realise economies of scale and scope and thus drive high technology medicine by enlarging the market (Chee 2010). Also, positive externalities could arise through income generated from medical travel-related tourism. In practice, however, it is relatively difficult to decompose medical tourism revenues into revenues from healthcare and non-healthcare services. In two of the rare empirical studies, Lee (2010) and Lee and Hung (2010) find that there is a unidirectional, long-run causality from healthcare to international tourism in Singapore, which confirms that the healthcare sector has positive effects on international tourism in the long-run. Similarly, mode 3 trade in health services could contribute to increasing foreign exchange earnings and benefit the host country, especially if profits are not all repatriated as for example concluded in Janjaroen and Supakankunti (2003), who find that in the case of Thailand remittances are rather low. While increased competition from foreign hospital service providers could in principle result in greater efficiency and lower prices of medical services, supporting evidence for the three countries does not exist. On the contrary, Pachanee (2009) and NaRanong and NaRanong (2011) suggest that medical tourism causes higher prices of medical services in Thailand, although NaRanong and NaRanong (2011) acknowledge that their correlational analysis cannot imply causality. Wibulpolprasert, et al. (2004) estimate that the resources needed to treat one foreign patient could be equal to those needed to treat 4–5 Thai patients. Besides, the costs for international hospital accreditation are substantial. In addition, Janjaroen, Supakankunti and Pongpanich (2007) point out that medical tourists pay in fact less than tax-paying Thai and foreign patients, given the extent of subsidies.

**Human resources**

Most studies reviewed conclude that medical tourism can worsen health personnel shortages although Janjaroen and Supakankunti (2003) for example do not confirm a causal relationship between foreign ownership of hospitals and the internal brain drain in Thailand. Pachanee and Wibulpolprasert (2006) estimate that the number of additional doctors needed for foreign patients in Thailand in 2015 will be around 176 to 303 (or 9 to 12 per cent of additional doctors required within the health system and 23–34 per cent of those required for Thai patients) and conclude that demand from Thai patients not medical tourists is the main driver of the internal brain drain, although the authors acknowledge that this might change in the future. The estimates provided by Pachanee and Wibulpolprasert (2006), however, are strongly questioned by NaRanong and NaRanong (2011). Leng (2010) also states that the internal brain drain in Malaysia is not entirely caused by medical tourists. Kanchanachitra, et al. (2011) add that in Thailand the shortage of doctors mainly concerns highly specialised doctors such as cardiologists, neurologists and
neurosurgeons, which particularly affects medical schools and the quality of medical education through the loss of teaching staff. From 2005 to 2006, more than 300 specialists moved from the public sector to private hospitals in Thailand (Kanchanachitra, et al. 2011).

Chee (2008) acknowledges the argument that medical tourism could actually reduce external brain drain, but notes for the case of Malaysia that “this is beneficial for the country as a whole only if expertise in the private sector is accessible to the population at large, which is not the case in the current dual system of healthcare” (Chee 2008: 2152). Although external brain drain is more pronounced in other ASEAN countries like the Philippines and Indonesia, Malaysia like other countries has put measures in place to reverse the external brain drain, which might be done on the premise of medial tourism expansion (Smith, Álvarez and Chanda 2011).

The impact on the export country also depends on whether the migrants are temporary or permanent migrants (Kanchanachitra, et al. 2011). In case of temporary migration, i.e. human capital enhancing brain circulation, migrants will return to work in the home country.

Another argument commonly brought forward is that medical education is highly subsidised and that the public sector should therefore benefit from the benefits raised from medical tourism since private and public hospitals typically recruit from the same pool of graduates. According to Kanchanachitra, et al. (2011), Singapore is the major importer of doctors in the Southeast Asian region, with two-thirds of doctors having been educated abroad about 30 per cent being foreigners.

Governance

Although there is broad agreement in the literature that trade policy goals are competing with health policy goals and that several government bodies are involved in medical tourism, their role and aims have not been assessed yet as indicated in Pocock and Phua (2011). In addition, virtually nothing is known about the process of deal making, bargaining (power) and negotiation.

Regulation

Smith, Álvarez and Chanda (2011: 278) note that “regardless of the quality of the care, professional errors are likely to occur eventually, and when they do there may be limited recourse for compensation”. Medical tourism, however, is likely to amplify concerns in the areas of insurance cover, liability and litigation as well as ethical concerns, during pre-procedure, procedure and post-procedure stages. In addition, medical tourism intermediaries are facing potential liability issues. However, as stated in Lunt, Smith, et al. (2011) severe legal uncertainties have prevailed, either due to the presence or absence of regulations. Ethical challenges commonly arise if there are no clinical trials to assess efficacy and effectiveness of an intervention or in case of reproductive travel (i.e. gender selection in IVF), especially as records of clinical outcomes for medical tourist treatments are limited (Lunt, Smith, et al. 2011).

6. Company strategies

To examine company strategies related to medical tourism of major health care companies in Malaysia, Singapore and Thailand, this study draws on Lethbridge (2011), who analyses the role of multinational healthcare companies in public sector healthcare systems using Porter’s Five Forces (Porter 1980). Porter’s Five Forces that affect the profitability of an industry are barriers to entry, supplier power, buyer power, substitute power and rivalry (Warner 2010). The interview guideline presented in Appendix 1 was designed to cover all
five dimensions and also included questions about the relationships with the public health system. The following paragraphs present the thematic analysis of the IDIs, which were conducted in March 2013.

**Barriers to entry**

As pointed out in Lethbridge (2011:6), “*the development of a knowledge base about how to operate within the public sector environment is key to entering the market*” as it is often the government that erects barriers.

In all three countries major barriers to trade are perceived to exist in mode 3 and 4 trade in services. Mode 1 trade in services is somewhat impeded by legal uncertainties, while mode 2 trade in services is generally not directly restricted. Foreign equity participation (mode 3) is restricted as indicated in table 6, while foreign health personnel wishing to practice in Malaysia, Singapore or Thailand (mode 4) must possess a basic qualification, which has to be approved and registered by the relevant bodies to obtain a license. In Thailand, this process is more stringent as foreign practitioners must pass the examination set by the relevant councils in Thai language.

Whereas ownership changes and resulting repositioning typically affect rivalry, i.e. the impact of competition, the analysis is more complex in the case of Malaysia, where significant changes in ownership have taken place over the past years. These changes saw the Malaysian government expanding its role in the “private or paying” healthcare market segment. Today, a number of so-called “private hospitals” are owned by the federal or state governments (Phua and Barraclough 2011). In fact, one respondent stated that “*the government is the largest investor in the private health sector*”, which some believe has resulted in conflicts of interest. In addition, these ownership changes may impact government policy and erect barriers to entry. The government investment vehicle, Khazanah Nasional Berhad, for example, holds an extensive healthcare portfolio through IHH Healthcare Berhad (Khazanah Nasional Berhad n.d.), of which it is a major shareholder together with its strategic partner Mitsui & Co. Ltd. IHH Healthcare Berhad in turn wholly owns Parkway Pantai Limited and IMU Health (Malaysia’s first private healthcare university as mentioned above) and indirectly owns 60 per cent of Acibadem Holding, a private healthcare provider in Turkey (IHH Healthcare Berhad 2013). In addition, IHH Healthcare Berhad holds an 11.2 per cent stake in India’s Apollo Hospitals Enterprise (IHH Healthcare Berhad 2013). Also at the national level, the government’s Permodalan Nasional Berhad still holds a major stake in Sime Darby and thus Sime Darby Healthcare (Chee 2008). KPJ hospitals, on the other hand, are owned by the Johor state government (Phua and Barraclough 2011, Chee 2008).

Privatization policies also opened up the Malaysian health care sector to foreign investors such as Singaporean Parkway Pantai Limited, which was eventually acquired by Khazanah Nasional Berhad, but the fact the government accounts for a large portion of the “private sector” make the Malaysian health care sector somewhat unique. In addition, one respondent suggested that the MoH is also involved in a number of referral centres, supporting its efforts to target patients from Europe and the Middle-East.

In Malaysia and Singapore, the government is a large player in the medical tourism sector and as posed by Chee (2010: 347), “*the key question is whether such direct state interests in private healthcare will lead to a conflict of interest with the state’s obligations and responsibilities to the people who are dependent on public healthcare*”. Phua and Barraclough (2011) note that privatization appears to have benefitted those with connections to the political elite and encouraged rent-seeking behaviour. One of the respondents explained that at times tax incentives for private investment in the health care sector seemed to have also been given based on affiliation with the government.

In contrast to Singapore and Thailand, one respondent noted, that “*the Malaysian government is likely to continue promoting health tourism as it ties to broader reform*
measures of providing choices of quality of care while maintaining equity”. The Thai government’s approach to medical tourism on the other hand has been very fragmented and another respondent pointed out it should “market the country” like Malaysia and Singapore rather than individual hospitals to avoid the emergence of favouritism.

Supplier power

While medical supplies are undoubtedly an important part of hospital budgets, the cost of these supplies typically is second to the cost of labour. When asked about supplier power, respondents thus generally focused on labour supply. One respondent stated that there is intense competition for medical professionals in Malaysia, with most senior staff having left public facilities. To deal with the shortage of medical doctors, the following changes were initiated. First, in an effort to reduce the internal brain drain problem, the no moonlightening policy was relaxed, allowing doctors to work in the private sector, which is of importance in urban although not to the same extent in rural areas. In addition, doctors from university hospitals were permitted to do locum in GP clinics. Besides, allowing teaching hospitals to operate commercial private wings is seen by one respondent as inducing public sector specialists to stay in academia. Second, the regulations for returning senior doctors from abroad were eased as one respondent noted. Senior doctors, who wish to return to Malaysia, are exempt from the three-year compulsory service in the public sector. Third, the private sector has taken an important role in the production of health professionals as private universities and satellite campuses of foreign universities have emerged across Malaysia such as the IMU, Monash University Malaysia Campus and University of Nottingham Malaysia Campus. The respondent explained that the quality of the private schools varies significantly, with lower tier universities lacking teaching staff, materials and teaching hospitals although the Malaysian MoH allows some private universities to use its facilities as teaching hospitals under terms and conditions agreed upon in a memorandum of understanding. While teaching is commonly done by private sector faculty, MoH staff is regularly invited as adjunct faculty under these agreements.

To counter the shortage of specialists in public hospitals, several initiatives were taken in Singapore, including a visiting consultant scheme under which doctors from the private sector could temporarily work part-time in the public sector. One respondent explained that these schemes did not work well in practice as in Singapore the salaries in public and private hospitals are comparable resulting in people moving for non-financial reasons (such as workload). The private sector in Singapore also plays a role in the education of medical professionals. One respondent noted, however, that the private sector hardly does any research because government research is extremely well-funded as for example in the case of Biopolis, the research and development centre for biomedical sciences shows.

There is general agreement that the internal brain drain is a major problem in Thailand although some disagreement exists regarding its causes. In 1971, for example, 93.2 per cent of doctors were working in the public sector, but only 82.9 per cent in 2009. Over the same time period, the share of doctors working in the private sector increased from 6.7 per cent to 17.1 per cent (Ministry of Public Health Thailand 2011). Doctors have increasingly sought to undertake specialty training and as of 2009, 85.2 per cent of doctors had a medical specialty certification. In 2008, 31.6 per cent of doctors in Bangkok were working in the private sector compared with 5 per cent in Thailand’s Northeast (Ministry of Public Health Thailand 2011). 56.7 per cent of doctors and 32 per cent of professional nurses worked part-time in the private sector in 2009. To counter the mal-distribution of medical doctors, the Thai MoPH initiated two major projects, the 1996 “Increased Production of Medical Doctors for Rural People” project and the 2005 “One District, One Doctor” project, aimed at recruiting local students. So far, 2,156 students have graduated under the former project, while 1,098 students, who upon graduation will be required to work for the MoPH for 12 years, were
admitted under the latter project (Ministry of Public Health Thailand 2011). At present there are 18 medical schools in Thailand, of which only 1 is private.\(^\text{12}\) This private medical school is cooperating with a public hospital for clinical work. However, there are several private universities that offer nursing degrees. One respondent explained that the private hospitals could play a larger role in medical education, especially post-graduate education in cooperation with public universities, but noted that it is difficult to obtain permission from Thailand’s Medical Council. One private hospital, the respondent noted, has chosen to offer training courses for nurses, which seem to be accepted by private hospitals (as their nurses are sought after by other private hospitals) but not the government. The respondent confirmed that many public sector doctors are working part-time under individual contracts at private hospitals. In fact, one respondent stated that at their hospital only 25 per cent of doctors are full-time doctors. The possibility of addressing the shortage of medical personnel with increased mode 4 trade in services was broadly rejected due to existence of a language barrier in obtaining a license. One respondent noted that nurses from other countries might not have any interest in applying for a license to move from a non-nursing position to a nursing position, unless their mother tongue is a tonal language (assuming that this would allow them to master the Thai language within a short period of time).

**Buyer power**

According to Article 106, of the 1998 Private Healthcare Facilities and Services Act (Laws Of Malaysia 1998) a fee schedule for healthcare facilities may be prescribed and has been adopted for many years. At present, the 13th fee schedule is in force (Malaysian Medical Association n.d.) implying that prices are regulated as a maximum chargeable fee is set. Respondents suggested that health care providers do not compete on price but rather on perceived quality. As Malaysia is moving towards universal health care coverage, however, this may change, as a social health insurance system with access to both public and private facilities across all levels of care in addition to cost sharing options has been considered in response to the demands of the growing middle class.

In Singapore, hospital charges for subsidized citizens and permanent residents are billed according to condition, type of procedure and ward class, with doctor fees in the public sector set by the MoH (Reisman 2010). MediSave, the compulsory national medical savings scheme, can be used for hospitalisation expenses up to the MediSave withdrawal limits. In addition, should MediSave be insufficient to cover hospitalisation bills for B2 and C wards, these may be covered by MediShield, an opt-out, voluntary low-cost catastrophic illness insurance scheme with deductibles and co-insurance. Besides, needy Singaporeans are covered by MediFund, an endowment fund. Private and foreign patients in public or private hospitals, on the other hand, are not subsidized and prices have been market determined since 2006 and may differ.

In Thailand, patients visiting private hospitals that are not contracted by the NHSO or SSO pay out of pocket unless they are covered by private health insurance, but very few are. One representative of a tier 1 hospital noted that around three quarters of their claims are settled in cash and added that there is hardly any potential for the private health insurance market in Thailand at present due to the prevalence of risk-pooling within the family.

The afore-mentioned means that in the medical tourism segment, which is characterised by a large degree of service differentiation, the cost of private hospital treatment is largely determined by negotiations between patients and providers directly, and not through negotiations between a third party and providers like in many other countries. In Malaysia, unlike in Singapore and Thailand, however, prices are capped.

\(^\text{12}\) In addition, the private Thonburi Hospital Group has recently teamed up with the private Siam University to establish a Faculty of Medical Science (Thonburi Hospital n.d.).


Substitute power

Respondents generally acknowledged the need for the development of substitute products. Efforts, however, are mostly concentrated in the area of quality of care and ancillary luxury services, aimed at enhancing the procedure stage experience, rather than the development of substitute products to ease problems in the public health sector. Besides, these ancillary luxury services, while increasing service differentiation, may exhibit high price elasticity. Thailand’s Bumrungrad Hospital, for example, offers accommodations at its serviced apartment, thus catering to the special needs of patients, family and visitors. New forms of health care delivery, however, are piloted in Malaysia and Thailand. In Malaysia, the development of the International Islamic University Malaysia Teaching Hospital through a private finance initiative has been proposed, while in Thailand two operation & management public-private partnerships are piloted, under which the private hospital group operates and manages a public health facility and provides health services within the public health facility. One of the hospitals states that they provide private hospital experiences for public hospital prices.

Rivalry

Private and public hospitals in Malaysia are generally not viewed as competing with each other because the serve different market segments as one respondent explained. While highly subsidised care, especially basic care, is provided by the public sector, better-off patients have increasingly opted to seek treatment at private facilities due to perceived better quality of care. Corporatized hospitals are considered as competing with private hospitals to attract medical tourists. Private sector hospitals mainly compete on the basis of perceived quality of care, seeking to increase service differentiation, despite the fact that the quality of clinical procedures at private hospitals has remained an issue of concern. Quality of care, as the respondent added, is often assessed by patients in terms of appearance only and respondents agreed that secondary and tertiary care is of higher clinical quality in public hospitals. The respondent noted that this has caused problems as the middle-class does not want to visit public facilities, but cannot afford to pay for health care at private facilities, which is considered expensive. Competition among private hospitals is intense and there are virtually no restrictions imposed by the government other than in the form of advertisement guidelines imposed by the Ministry of Health. In addition, foreign direct investment in the Malaysian health care sector picked up following privatization, probably having increased competitive pressures. Medical tourism is concentrated in Kuala Lumpur as well as Penang and Malacca given the geographic and cultural proximity of the two states to Indonesia. One respondent noted that the Indonesian market, with Indonesian patients demanding all types of high-value surgery and dental services, in fact offers higher value than the targeted European and Middle-East markets.

In the case of Singapore, as one respondent stated, private hospitals cannot compete with the public hospitals given the pro-active nature of the Singaporean government and the funding provided. Another respondent added that “the government acknowledges the private component, which allows choice and serves the foreign market, but there should be no disadvantage to Singaporeans.” In addition, it was noted that “hospitals in Singapore are ranked based on patient satisfaction with the “list of shame” subsequently published in the

---

13 The two examples are the (i) soon to open Pattaya City Hospital, which is owned by the special-status municipality, and (ii) Phuket Provincial Administrative Organization Hospital, which is owned by the Or-Bor-jor administrative division.

14 While the Malaysian Ministry of Health (MoH) and the Malaysian Society in Quality Health started implementation of an accreditation system in 1997, the first Malaysian hospital received JCI accreditation only in 2008 (Chee 2010). As reported in Kanchanachitra, et al. (2011), a total of 38 hospitals in the ASEAN region are JCI accredited, of which 16 in Singapore, 11 in Thailand and 6 in Malaysia.

15 Advertising regulations were relaxed in 1998 and 2005 though. (Chee 2010)
newspapers”. Private hospitals are viewed as relying on medical tourists given their low occupancy rates and their future depends on the Singaporean government. It was further explained that the government does not appear willing to release more land for private hospitals, while the expansion of public hospitals, however, is planned with land having already been made available.

In Thailand, as the medical tourism market is dominated by a few players hospitals can choose either price or quality as variables of choice. While quality of care might be an issue at tier 3 private hospitals, tier 1 and tier 2 private hospitals indeed offer high quality care across all levels. Most medical tourists seeking care in Thailand are reported to come from Indochina (especially from Cambodia and Vietnam), Myanmar, the Middle East and North America, indicating possible gains from diversification. One respondent noted that about 60 per cent of total revenue at their hospital is generated from medical tourists.

While one of the dominant players in Thailand has pursued a horizontal expansion strategy within the country and across the region, the other is interestingly considering vertical integration (after a brief trial of horizontal integration) through acquisitions. Vertical integration aims at leveraging observed referral patterns within and outside of Thailand by moving lower levels of care out to peripheral facilities, while retaining the tertiary segment in the main hospital. This in essence creates a referral framework for the main hospital (Yap, Chen and Nones 2008). In addition to these networks, outsourced and affiliated referral centres are employed for inter alia marketing, information dissemination and logistics. None of the respondent could or would provide information about referral centres or medical tourism facilitators although these intermediaries seem to play a vital role the pre-procedure, procedure and post-procedure stages (especially regarding the information flow between doctors in importing and exporting countries). Well-designed post-procedure stages are important for complex procedures that require follow-up care.

Interestingly, and contrary to Lethbridge 2005 (cited in Lethbridge (2011), none of the respondents mentioned that the public health care sector is viewed as an expanding market. This might be due to the fact that medical tourism is generally considered a fast growing market. In fact, one of the respondents strongly stated that there is no interest in the public health care sector at all, mainly due to the low pay by the government. It was also noted that tier 1 private hospitals in Thailand hardly interact with the government. Linkages only exist in the areas of emergency care (patients who cannot afford to pay out of pocket and do not have a private health insurance must be stabilised in case of emergency nearby the private hospital before being referred back to a public facility) and public health (e.g. avian influenza in humans tests). The respondent added that incentives for Thailand’s top medical tourism hospital to work with the government do not exist as such a move would not fit its strategy. Although the respondent acknowledged the emergence of public private partnerships in Thailand under which operation and management of a public facility is given to a private hospital, the need for consistency with the overall company strategy was highlighted.

7. Concluding remarks

The comparison of the present role of the private hospital sector in the overall health system and for medical tourism in particular as well as the environment in which it operates, reveals that the size of the private hospital sector is similar in Malaysia and Singapore, but smaller in Thailand. Not only do private hospitals tend to be smaller than public hospitals, but they also have lower bed occupancy rates, indicating excess capacity. In all three countries, the 1997 Asian financial crisis signalled a turning point for the medical tourism industry. FDI patters of Malaysian and Singaporean hospital groups are different from those in Thailand, which is due to the fact that most medical tourists travelling to Malaysia and Singapore are
still from within the region, whereas institutions in Thailand also serve patients from other parts of the world. The business environment for private hospitals in Thailand seems relatively more restricted compared to Malaysia and Singapore. In addition, while governments in Malaysia and Singapore have heavily supported medical tourism, the Thai government’s approach appears rather fragmented. Another key observation is the emerging role of the private sector in the production of health and especially medical professionals through the establishment of private medical schools in all three countries and the formation of strategic alliances with partners abroad.

Studies reviewed that seek to assess the impact of medical tourism on the three countries’ national health systems are mostly based on anecdotal evidence due to a lack of data. In addition, some results are ambiguous. This reinforces the need to strengthen data collection to enable empirical assessments as emphasised in the recent literature (Lunt, et al. 2011, Smith, Álvarez and Chanda 2011 among others)

The results from the IDIs reveal that it is useful to analyse the strategies chosen by private hospitals in the three countries using Porter’s Five Forces framework. Interestingly, while some governments have expanded their role in the “private or paying” healthcare market segment, no major partnerships between medical tourism hospitals and the public sector seem to have emerged. This implies that the change in ownership has not triggered a reformulation of the strategic orientation. Continued growth in incomes will increase demand for health care and therefore stretch the capacity of public hospital systems further. Interestingly, however, the public hospital sector has not (yet) seem to have been considered an expanding market, especially in Thailand.

Policy tools governments, particularly in countries without significant government interests in the private hospital sector, could use include (i) expansion of (private) medical education, while controlling the quality of education, to counter shortages of health professionals and (ii) adoption of redistributive financing mechanisms such as for example taxing medical tourism revenues to reduce possible negative implications for equity.

Acknowledgements
This paper was prepared as one of the background papers for the course on “Engaging the private sector to achieve health systems goals – Private hospitals and the private sector as partners for universal health care coverage: Policies, strategies and tools”, developed by the Asia Network for Capacity Building in Health Systems Strengthening (ANHSS) in conjunction with the World Bank Institute and delivered in May 2013 at the School of Public Health and Primary Care, The Chinese University of Hong Kong. The study was funded by the ASEAN Studies Centre of Chulalongkorn University, Bangkok, Thailand. The authors thank the 7 experts from Malaysia, Singapore and Thailand for sharing their views on medical tourism and private hospitals in general.

Authors’ contributions
Chantal Herberholz was responsible for conducting the research and wrote the first and final versions of the draft. Siripen Supakankunti provided comments on the drafts. The in-depth interviews in Malaysia, Singapore and Thailand were jointly conducted.


Phua, Kai Hong, and Nicola S. Pocock. “Transforming the ASEAN Economic Community (AEC) into a global services hub: Enhancing the competitiveness of the health services sector in
Singapore." In Developing ASEAN Economic Community (AEC) into a global services hub, by Tereso S. Tullao Jr. and Lim Hong Hin, 111-146. Jakarta: ERIA, 2011.


Singapore Medical Council. Becoming a registered doctor - International medical graduates. n.d.


Thonburi Hospital. *Thonburi events: Faculty of Medical Science.* n.d.

Tullao Jr., Tereso S., and Lim Hong Hin. *Developing ASEAN Economic Community (AEC) into a

UN ESCAP. "Medical travel in Asia and the Pacific: Challenges and opportunities." 2009.

Warner, Alfred G. *Strategic analysis and choice: A structured approach.* New York: Business


—. *Singapore - Country health information profiles.* n.d.

Wibulpolprasert, Suwit, Cha-aim Pachanee, Siriwan Pitayarangsarit, and Pintusorn Hempisut.
"International service trade and its implications for human resources for health: a case

(accessed February 9, 2013).

World Bank. *Private sector assessment for health, nutrition and population (HNP) in Bangladesh.*

development-indicators (accessed September 8, 2012).

Yap, Janson, Sim Siew Chen, and Nelson Nones. *Medical tourism: The Asian chapter.* Singapore:

Yilmaz, Yildirim, and Umit S. Bititci. "Performance measurement in tourism: a value chain
341 - 349.
APPENDIX 1 GUIDELINE QUESTIONS FOR IN-DEPTH-INTERVIEWS

1. What is the market share (in terms of hospital beds) of major medical tourism hospitals in [country]?  
2. What medical services do they specialise in?  
3. What is the role of private hospitals in the [country] health system?  
4. What is the potential for hospital services market growth (i.e. for medical tourism and the public health care system) in [country]? What about hospital services markets in other ASEAN countries?  
5. How do patients mainly pay for services received at private hospitals in [country] (e.g. private insurance, public insurance, OOP)?  
6. Are public hospital services prices (i.e. what public hospitals receive for their services) transparent?  
7. What type of service (i.e. clinical and non-clinical service), if any, is typically outsourced by public hospitals to the private sector?  
8. Have there been any major changes in hospital ownership in [country] over the past 10 years?  
9. Was the government involved in any of these ownership changes?  
10. What are the main barriers potential domestic and foreign entrants (i.e. GATS mode 3 entry) into the [country] hospital sector face?  
11. What are the main strategies used by [country] health care firms to enter domestic and foreign hospital sectors? (e.g. joint ventures, M&A, greenfield investment)  
12. How active are [country] health care companies/investment companies across ASEAN hospital sectors?  
13. What is the extent of foreign firms’ participation in the [country] hospital sector?  
14. What kind of support is provided by government bodies?  
15. How important are referral gateways for medical tourists and do these appear biased towards certain hospitals? Are these regulated?  
16. Who are the main buyers (e.g. third-party payer, consumer) of hospital services in [country]?  
17. What contracts exist between buyers and sellers (i.e. hospitals) in [country]?  
18. What is the typical length of contracts between buyers and sellers?  
19. Are these contracts flexible (i.e. can these be adjusted)?  
20. Are there any hospital PPPs in [country]? Do these facilities provide services to medical tourists?  
21. How strong is the bargaining power of main suppliers (e.g. medical professionals (traditional and modern/conventional), pharmaceutical companies, diagnostic services suppliers)?  
22. Are foreign firms active in the [country] hospital equipment and medical supplies market? To what extent?  
23. Is the private sector involved in the production of medical professionals (traditional and modern/conventional) in [country]? How?  
24. What are the main barriers foreign medical professionals seeking to work in the Malaysian hospital sector face (GATS mode 4 entry)?  
25. Does the [country] government regulate the market power of suppliers through competition policy?
25. Has the private sector developed any substitute products such as new ways of delivering health care, packages of care, etc.?

26. What are the main implications of medical tourism for the [country] health system (in terms of governance, delivery, financing, human resources and regulation)?