
Thailand Medical Tourism Cluster

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Microeconomics of Competitiveness

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SECTION 1 COUNTRY ANALYSIS



Figure 1 Map of Thailand and major provinces¹

In 2006, the kingdom of Thailand will celebrate King Bhumibol Adulyadej's 60th year on the throne, which would make him the longest reigning monarch in the world. As king of a constitutional monarchy country, King Bhumibol has only three "rights": to encourage, to warn, and to be consulted. He is, however, extremely well respected and loved by the people of Thailand. His guidance is very important to the people and the country, especially during times of crisis.

During the past 60 years, Thailand has developed into one of the most prosperous countries in Southeast Asia. The economy has shifted from its agricultural based into one that is powered by the industrial and service sector. A very successful cluster, Thai tourism is ranked 18th in the world in terms of cluster size.² A popular niche that has spurred from this cluster is health tourism, which is growing rapidly at 40%. With the future opening of the new international airport in Bangkok, Thailand now aims to be the tourism capital of Asia.

1.1. THAILAND POLITICAL SOCIAL AND ECONOMIC DEVELOPMENT

Formerly known as Siam, Thailand is the only country in Southeast Asia that has never been colonized. Since its founding many centuries ago, Thailand has always been a monarchy. Thailand's modern political, social and economic development can be divided into seven periods and was begun in 1932 when a bloodless revolution introduced the concept of constitutional monarchy with representative democracy.

¹ Source: CIA The World Factbook <http://www.cia.gov/cia/publications/factbook/geos/th.html>

² Source: Prof. Michael E. Porter, International Cluster Competitiveness Project, Institute for Strategy and Competitiveness, Harvard Business School; Richard Bryden, Project Director. Underlying data drawn from the UN Commodity Trade Statistics Database and the IMF BOP statistics.

Period I Creating the Foundation (1932-1957): After the revolution that changed the political system, Thailand's modern development began with the creation of various government ministries and institutions, such as Bank of Thailand, Board of Investment, and National Economics and Social Development board (NESDB), which were responsible for the national development agenda.

Period II Development Dictatorship (1958-1972): The military took over following a period of democratically elected governments. The economic and social development continued with the creation of a five-year national economic development plan in 1961. The first two plans, established in 1961 and 1967, were aimed at raising standards of living by emphasizing developments in agriculture, irrigation, education, and infrastructures, such as highways. Private sector development was also highlighted as a means to reduce dependencies on few primary commodities.³

Period III Democratic Revolution (1973-1984): Student protests that turned into riots in 1973 and 1976 led to the birth of a less militarized political system. During this period, national development plans placed an emphasis on improvements of rural infrastructure, growth in the financial and commercial sectors, and further assistance to crop diversification and import-substitution industries.⁴ This course of actions resulted in an increased income gap between the rural and urban population and Thailand saw an increasing number of work-seeking migrants in the urban areas. In an effort to mitigate this problem, the government decentralized the industry and economic growth to focus on the provinces. The government also ended its import substitution policy and started an export promotion strategy by establishing four investment promotion zones and industrial estates, such as Lard Krabang, which had a duty-free export-processing zone in addition to a general industrial area. In 1981, following the completion of a natural gas pipeline from the Gulf of Thailand, the government focused its investment priority on the Eastern Seaboard Development Program, a US\$4 billion investment. This program has a lot of emphasis on heavy industries, such as natural gas

³ Thailand Economic Development

<<http://www.nationsencyclopedia.com/Asia-and-Oceania/Thailand-ECONOMIC-DEVELOPMENT.html>> (Access May 2005)

⁴ Ibid

separators and petrochemicals plants, and was aimed to create a new urban-industrial complex in the Rayong-Sattahip region, which has a deep sea port.

Period IV Industrialization (1986-1990): After the Plaza accord was signed in 1985, Japan and many other industrialized countries felt the pressure to look for a low cost production base that would make them more competitive in the export market. With its developed infrastructure base, low labor cost, and government's export promotion strategy to attract FDI, Thailand was well positioned to take advantage of this trend. As foreign investment grew, with a big portion coming from Japan, many factories were opened in the export promotion zone and the manufacturing sector experienced rapid growth as Thailand's economy started its shift from agricultural to industrial.

Period V Financial Liberation to Crisis (1991-1997): With the economy booming, the government continued to invest in infrastructure, extending all main national arteries into four lane highways, improving railway into double-tracking, and opening new ports. A deep sea port was opened in Laem Chabang, as a result of the Eastern Seaboard development plan. The government also started a regional development in 1992-1997 to redistribute wealth to the provinces. The development came to a halt when the economic bubble burst in 1997. A high interest rate and less regulation on capital flow, combined with the fixed currency exchange rate, led to an influx of foreign capital and speculations, ending in a crisis that rocked the whole region.

Period VI Post Crisis Road to Recovery (1998-2001): With the IMF-guided international bailout program, a three-year, US\$17.2 billion support package conditioned on a program of economic reforms, Thailand began its recovery process. The country enacted a new constitution to implement social, political, and economic reforms in 1997. The government implemented tight fiscal and budget control with the exception of health and education expenditures. The government also implemented various reform measures to bring down inflation and replenish foreign reserves, adhering to IMF's reform program.

Period VII Thaksin Era (2001-2006) The first government elected under the new constitution came into power in 2001 lead by Thaksin Shinawatra, a tycoon with successful business background. With the “dual track” approach and various new social, political, and economics policies, Thaksin’s government led Thailand towards economic recovery. In his words, the “dual track” approach *“represents a new policy paradigm of simultaneously pursuing the development of a strong domestic foundation for the economy as well as promoting linkages through international trade, investment and financial cooperation. The two tracks combined will lay a solid base for sustainable growth and stability for the country.”*⁵ The national development took a philosophical turn as the government adopted the king's concept of "sufficiency economy" as its guiding principle. "Sufficiency economy" was explained to be *“based on adherence to the middle path, and involving moderation not just as a guide for economic policies but as a way of life. Balanced development was to be achieved through a combination of patience, perseverance, diligence, wisdom and prudence.”*⁶

Unlike his predecessors, Thaksin’s government implemented various new policies under the new philosophy. To develop the country’s “grass-root” economy, the government policies included a three year suspension of some debts owed by poor farmers to state banks; locally administered micro-loans, which are supported by a one million baht grant (approximately US\$24,000), to the country’s 70,000 villages; more efficient debt restructuring by transferring non-performing loans to the newly established Thai Asset Management Corporation; the establishment of SME Bank, a state-owned lending agency for small and medium enterprises; the establishment of the People's Bank, which will extend small loans (up to about US\$370) for small retailing or commercial ventures; the "One Tambon (group of five or six villages), One Product/OTOP" scheme to promote product specialization by village groups as inspired by a similar Japanese program; and restructuring of the

⁵ Source: Dual-Track Policy <http://www.thailandoutlook.com/thailandoutlook1/government+policy/From+the+Government/Dual-Track+Policy.htm> (Access March 2005)

⁶ Thailand Economic Development
<<http://www.nationsencyclopedia.com/Asia-and-Oceania/Thailand-ECONOMIC-DEVELOPMENT.html>> (Access May 2005)

economy from heavy dependence on imports towards more reliance on local resources, especially agricultural.

On social policies, Thaksin's government created a universal health insurance plan, which reduced the cost for a hospital visit to 30 baht/visit (\$0.75) for all citizens. Having delivered promising results in its economic recovery plans, Thaksin Shinawatra, was reelected for a second term in 2005 by a large majority. However, a political crisis took place in April 2006, following the controversial sale of his telecom company to a foreign company. In the midst of the turmoil, Thaksin dissolved the parliament and held a new election. In spite of his party's victory in this election, he decided not to take office to bring peace to an increasingly polarized political situation.

1.2. OVERALL ECONOMICS PERFORMANCE

Compared to its neighbors, Thailand is a middle-income country with a superior GDP/capita and booming economy. For the past 5 years, GDP has been growing with an average rate of 4%, higher than most countries in the region except for Vietnam and Myanmar, whose economy has been growing rapidly over the past few years. The service sector has always been a major contributor to the economy, while the previously strong agriculture sector is gradually being replaced by the industrial sector, as can be seen from Figure 2. In 2006, the service and industrial sector contributes 46% and 45% to real GDP respectively, with agriculture making up the difference.

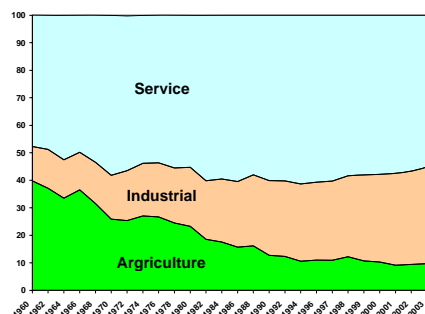


Figure 2 Composition of Thai Economy⁷

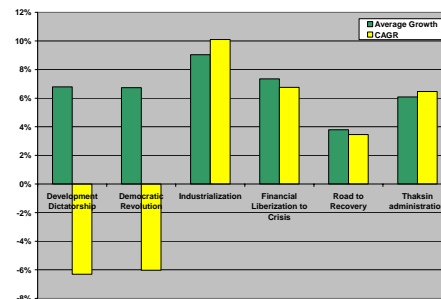


Figure 3 Thailand Economic Growth during each development period⁸

⁷ Ministry of Public Health, Thailand *Thai Health Profile 2001-2004* page 42 and data from NESDB, Thailand <http://www.moph.go.th/ops/health_48/index_eng.htm> (Accessed March 2006)

As shown in Figure 3, following the sixth national economic and social development plan in 1986, Thailand experienced a 10 year boom in its economy, resulting mainly from its export promotion strategy, public sector streamlining, and strict monetary and fiscal policies. GDP grew at 10% during this period, well ahead of its 5% target. The 1997 Asian financial crises put an end to this explosive growth, but under Thaksin's leadership, the country has been making great progress to return to its pre-crisis glory days.

Thailand has recovered in recent times from the 2.2% GDP growth in 2001 to 6.2% in 2004. On a large scale, much of this success is attributed by the previously mentioned "dual track policy", which has propelled a sustainable economic drive during these past years. Thai's banking sector has revived after the crisis and has been instrumental in channeling funds to businesses and households. This, combined with the Central Bank's low interest rates stance, has provided the impetus for a quicker economic recovery. Private investment, exports, and domestic consumption have shown a gradual surge; and while they are all growing at a different pace, these factors are all catalysts of Thailand's economic growth momentum. The government has managed to keep the unemployment level at a low 2% these past 2 years, with inflation was estimated to be around 3% for 2006.

A few setbacks in 2005 slightly dampen the economy. The combined effect of the Tsunami, bird flu outbreak, and a long drought led to a lower than expected GDP growth in 2005. The economy is now forecasted to grow at 5% in 2006, a slight increase from the 4.5% in 2005, with exports as the main driver.

For FY 2006, the government's fiscal policy will continue to focus on achieving a balanced budget position. The government is also allocating 25% of the budget to strengthen Thailand's physical and social infrastructure and enhance the country's competitiveness.

⁸ Author's analysis using data from Groningen Growth and Development Centre and The Conference Board, Total Economy Database

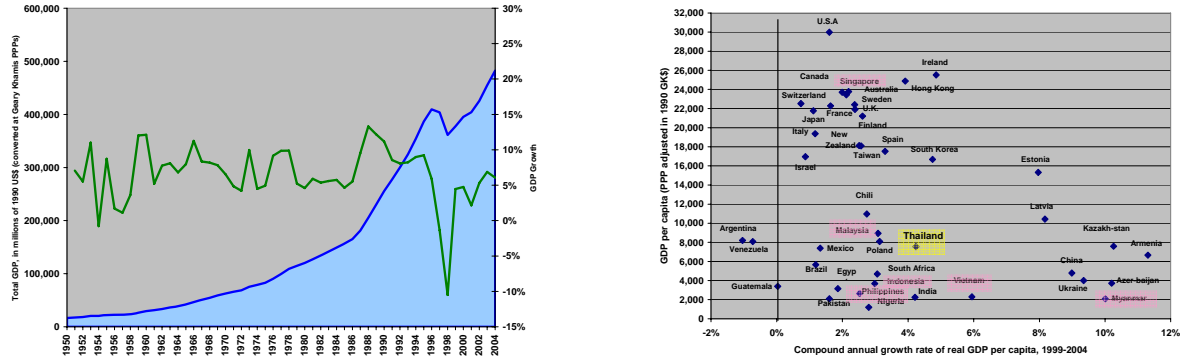


Figure 4 Comparative GDP per Capita Performance, Thailand GDP, and GDP Growth ⁹

SECTION 2 NATIONAL DIAMOND ANALYSIS

2.1 THAILAND NATIONAL DIAMOND ANALYSIS

Thailand has a strong factor condition and is improving rapidly in the other elements, particularly in creating a more robust industry structure and building an environment conducive to business.

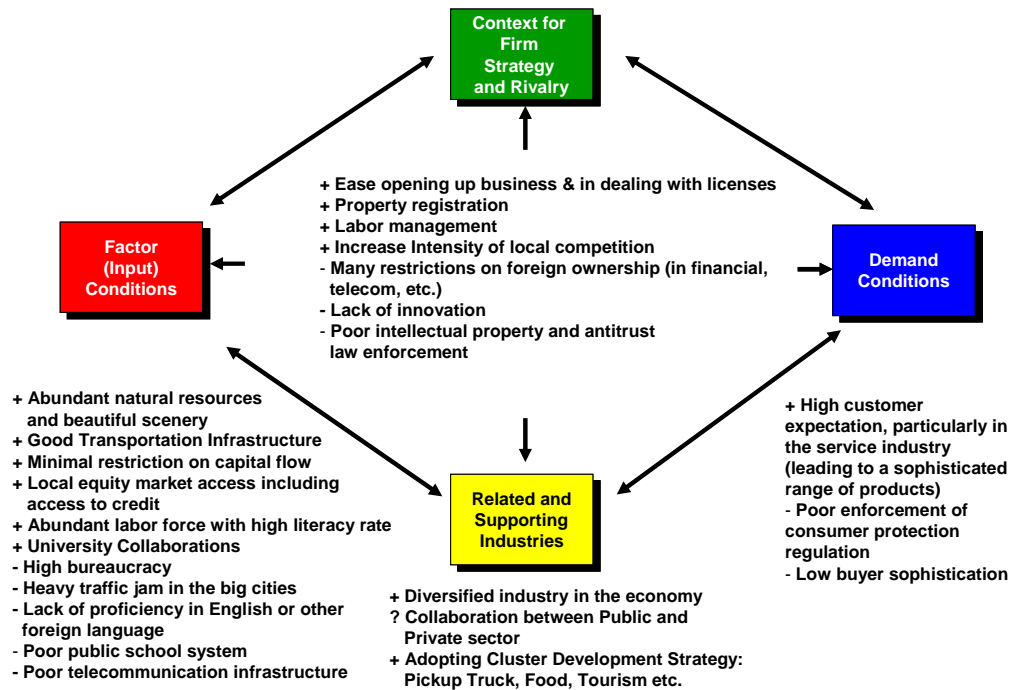


Figure 5 National Diamond Analysis

⁹ Source: Groningen Growth and Development Centre and The Conference Board, Total Economy Database, <http://www.ggdc.net>

FACTOR CONDITION

Thailand has bountiful natural endowments that include long and beautiful coastlines, the cornerstone of its world renowned tourism industry. With a free mandatory primary education for children from 6 to 12 years old, Thailand boasts a high literacy rate compared to its neighbors, increasing the quality of its labor force.

One factor that reduces the competitiveness of this labor force is the country's general lack of proficiency in foreign languages, including English. With the low unemployment rate, Thailand has a high labor participation rate but unfortunately its productivity is very low, as can be seen from Figure 6

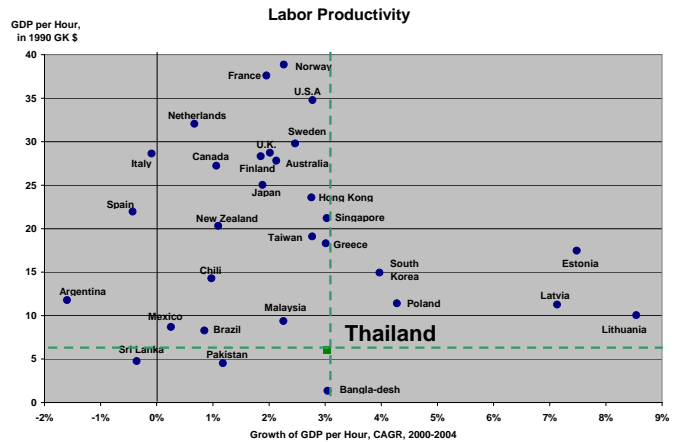


Figure 6 Labor Productivity¹⁰

As borders diminish between countries around the world and Thai's economy opens up further, this deficiency will be more pronounced. Thailand is also a busy transportation hub for South East Asia¹¹, a position which will increase once Suvarnabhumi, its new international airport in Bangkok, starts operation in June 2006.

The three most significant improvements in the factor condition that strongly affect Thailand's competitiveness are the access to credit, access to the local equity market (SET)¹² and a high savings rate. Loans and credit became much more accessible, particularly to the lower income population, due to the various measures that Thaksin initiated during his time in the office.

¹⁰ Ibid

¹¹ Bangkok International Airport handled 38 million passengers in 2004, a 25% increase from the previous year. It is currently the world's 14th largest airport in terms of passengers. **Source:** Airports Council International <http://www.airports.org/cda/aci/display/main/aci_content.jsp?zn=aci&cp=1-5_9_2> (Accessed May 2006)

¹² BCI ranking for access to credit increased from 63 to 12, and access to local equity increased from 42 to 15 between 2001 and 2005.

Compared to other local equity markets in Southeast Asia, SET has shown the most significant improvement since the crisis, second only to Singapore. In regards to savings rate, at approximately 30%, the Gross National Savings rate is higher than the world average of 23%¹³ and is one of the key sources of capital for the economy.

	Competitive Advantages		Competitive Disadvantages	
		Country Ranking		Country Ranking
Factor (Input) Conditions	Local equity market access	15 ↑	Extent of bureaucratic red tape	87 ↓
	Access to credit	12 ↑	Quality of public schools	52 ↓
	National Saving rate, 2004	19	Venture capital availability	52 ↓
	FDI and technology transfer	23	Telephone/fax infrastructure quality	46 ↓
	University/industry research collaboration	28 ↑	Reliability of police services	45
Context for Firm Strategy and Rivalry			Railroad infrastructure development	43 ↓
			Financial market sophistication	40 ↑
			Quality of scientific research institutions	40 ↑
			Judicial independence	39
			Port infrastructure quality	39
			Prevalence of trade barriers	62 ↓
			Effectiveness of antitrust policy	41
Demand Conditions	Government procurement of advanced technology products	22 ↑	Efficacy of corporate boards	39
			Favoritism in decisions of government officials	38 ↓
			Intellectual property protection	36 ↑
Supporting Industries			Intensity of local competition	36 ↑
			Buyer sophistication	34 ↑
			Presence of demanding regulatory standards	32 ↑
Note:	↑	Indicate an increase of 9 or more ranks since 2001	↓	Indicate a decrease of 9 or more ranks since 2001
	↑	Indicate an increase of 5 or more ranks since 2001	↓	Indicate a decrease of 5 or more ranks since 2001

Table 1 BCI Score for Thailand

The main weaknesses of the Thai business environment were identified as lack of transparency, low corporate governance levels, an inadequate banking sector, insufficient minority shareholder rights, inadequate business legislation and political interference. The extent of bureaucratic red tape in Thailand got worse in recent years as indicated by the drop in its BCI ranking from 72 to 87, out of 116 countries, between 2001 and 2005.

DEMAND CONDITIONS

This is the weakest link in Thailand’s national diamond. Although climbing slightly up in the BCI ranking, buyer sophistication is still very low in Thailand. Customers are not very demanding in general and there are very few laws that protect customer’s right, unlike in most

¹³ Economic Indicators – Thailand <<http://earthtrends.wri.org>> (Accessed May 2006)

developed countries, where buyers demand a relatively high standard for product quality and there are strict laws and regulations to protect a customer's well being.

CONTEXT FOR FIRM'S STRATEGY AND RIVALRY

Thailand is predominantly a free market economy with the private sector generating most of the economic activity. Public sector involvement has been instrumental in providing a framework for the economy's regulation and expansion. The government's major contribution to economic growth has been to provide economic and social services, most notably to build highways, irrigation, and power facilities as well as to provide various incentives and financial assistance to promote private investments, export businesses and agricultural enterprises.

RELATED AND SUPPORTING INDUSTRIES

With the backdrop of the 1997 Asian financial crises, the Thai government obtained funding assistance from USAID in an effort to revitalize the economy through the Thailand Competitiveness Initiative (TCI) project, which aimed to expand competitiveness and cluster development. Thailand is already quite competitive relative to several Asian economies; however, Thai industries must reposition themselves in the face of global competition, and form clusters that create higher-value-added products in order to "leapfrog" over competing products from cheap-labor countries.

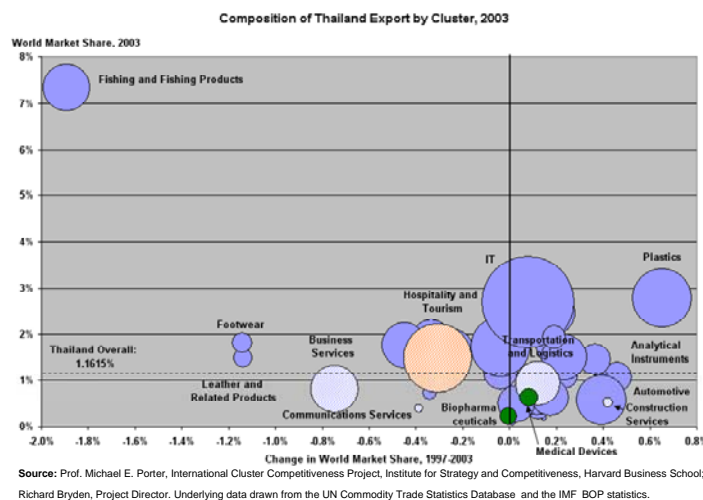


Figure 7 Composition of Thailand Export by Cluster, 2003

As the result of this initiative, Thailand is grooming new clusters alongside its existing clusters. IT is currently Thailand's largest export cluster, supported by strong performance of the Seagate factories¹⁴. Supported by its strong roots, Hospitality and Tourism is still one of Thailand's largest clusters. High growth clusters include plastics, analytical devices, and automotives. Once a world leader in fishing and fishing products, this cluster is now showing negative growth after Thailand ran into difficulties in complying with the strict environmental standards imposed by the EU, its main export partner.

2.2 CHALLENGES FOR THE COUNTRY

POLITICAL STABILITY

Thailand is still facing many challenges in its effort to strengthen its economy. One of the country's main concerns at the moment is maintaining political stability, a prerequisite in attracting a higher level of FDI. With guidance from the King, the country has managed to peacefully resolve the recent political turmoil. However, the future political situation of the country remains a question mark.

CAPACITY FOR INNOVATION

One other major barrier that Thailand must break to excel in this globalized world is its capacity for innovation. The current education system, which is very passive and places very little emphasis on practicality, doesn't stimulate children to be critical, challenge ideas or think outside the box.

Thailand has no clear dominance in technological or basic research, and start up funding for a new entrepreneurial idea is scarce. The number of patents originating from Thailand is extremely low and the country is far behind in its innovative capacity¹⁵. This lack of innovative capacity is a major

¹⁴ Seagate Technology, Inc. (NYSE: SEG) is the world's largest manufacturer of hard disc drives. The company entered Thailand in 1983 to take advantage of the country's low labor cost and lower its production costs. Thailand now constitutes its largest overseas operations and Seagate is today one of the largest companies in Thailand in terms of both employees and export value.

¹⁵ Thailand is ranked 46 out of 75 countries for its innovative capacity.

challenge that has to be addressed as a strong innovative capacity is integral to arrive at the high level of productivity necessary to achieve and sustain overall competitiveness.

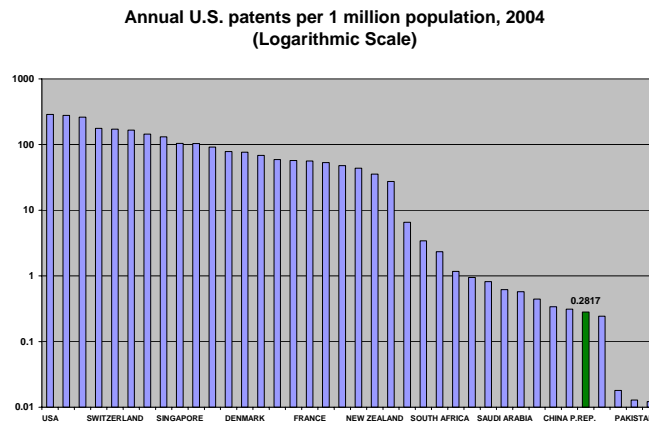


Figure 8 Annual U.S. patents per 1 million population, 2004 (Logarithmic Scale)¹⁶

LAW ENFORCEMENT, TRANSPARENCY & BUREAUCRACY

A reliable law enforcement mechanism and the reduction of bureaucracy and corruption are also integral parts in making Thailand more attractive for foreign investors. With strong routes in various organizations, particularly those in the public sector, eliminating bureaucracy will not be an easy task, but required to make the country more effective, efficient and investor friendly. A survey on the investor community in Thailand revealed that greater transparency and an improved regulatory environment are needed to improve the stock market as well as the investment climate in general.

INCOME INEQUALITY

One problem that the country is still struggling to overcome is income inequality. According to a study by the National Institute Development Administration, over the past four decades of development, Thailand has been among the top 10 countries with both the highest economic growth as well as the widest gap in terms of income inequality¹⁷. If we take a closer look at the regions of

¹⁶ Source: U.S. PATENT AND TRADEMARK OFFICE, <http://www.uspto.gov/web/offices/ac/ido/oeip/taf/cst_utl.htm> (Accessed March 2006)

¹⁷ Pisit Tuchinda. Monthly Macro Economic Snapshots, March 2006. Thailand Investor Service Center.

the country, it is apparent that they have striking differences in their economic performance. As the capital and the economic center of the country, Bangkok has the highest GDP among all the other regions; while the Northeast region, with its small industry based and agricultural economy, is recording the poorest result. Bangkok's Gross Regional Product in 2004 was 8.3 times higher than GRP for the Northeast region¹⁸. To boost the economy of this region, the government is planning to establish a link with Laos, Cambodia, and Vietnam to process raw materials from the respective countries and to provide services that can support investment and manufacturing in those countries.

OPENING UP OF THE ECONOMY

Although private sector is already the main driver of the economy, sectors such as telecommunications and banking remain protected by the government and full foreign ownership is prohibited. It is in the best interest of the country to open up these sectors and encourage more competition that could lead to a more advanced structure and stellar performance within these sectors.

SECTION 3 CLUSTER ANALYSIS

3.1. INTRODUCTION

3.1.1 MEDICAL TOURISM AND THAILAND'S SUCCESS

What is medical tourism? According to the Wikipedia, it is the act of traveling to other countries to obtain medical, dental, and surgical care.¹⁹ In other words, the cluster offers packages that include travels to and from the destination abroad, and medical services at the destination country.

Long before Thailand became one of the major destinations for medical tourism, people had already been accustomed to traveling abroad in order to obtain the best, state-of-the-art medical

¹⁸ Author analysis from National Economic and Social Development Board's GRP and GPP data

¹⁹ Wikipedia <http://en.wikipedia.org/wiki/Medical_tourism> (Accessed April 2006)

treatments. Many developed countries, like the United States, have been popular destinations for wealthy people seeking the best medical treatments from sophisticated institutions like Mayo Clinic, Johns Hopkins International, or hospitals affiliated with Harvard Medical School. As an example, a Japanese baby recently came to the United States for a heart transplant surgery, which can't be done for a child less than fifteen months old in her home country. The total cost was US\$2 million, most of which had to be financed by donation.²⁰

Thailand's story was slightly different. During the economic boom of the 1990s, as the economic condition improved and personal income level increased, public demand for good quality health care also increased accordingly. Leading private hospitals expanded their capacity to accommodate such demand. According to the Ministry of Public Health of Thailand, the total number of hospitals increased from 422 in 1991 to 491 in 1997, and the number of beds more than doubled, from 14,927 to 38,275 during the same period. However, when the 1997 financial crisis hit, the domestic market was significantly affected. Personal health expenditures were curtailed as economic condition declined. Private hospitals had to make up for the loss of their domestic patients by shifting their focus outside of Thailand and inviting patients from abroad. Because of the local currency devaluation, as well as the low labor and other factor costs, the total price of the medical treatment in Thailand was less than half that in the United States, even after adding in the costs of travel and accommodations.

In the face of declining revenue, Bumrungrad Hospital in Bangkok brought in a new management team from outside the country to manage its program for international patients and to lead the hospital out of its financial difficulties. Under this new management, Bumrungrad became the first internationally accredited hospital in Southeast Asia in 2002 and pioneered the medical tourism business. Its 50,000 international patients in 1997 had gone up to 350,000 in 2005.²¹ In this

²⁰ Save Mana Foundation <<http://ameblo.jp/save-mana>> (Accessed April 2006)

²¹ NewsHour, Feb. 21, 2005. <http://www.pbs.org/newshour/bb/health/jan-june05/thailand_2-21.html> (Accessed April, 2006)

sense, the success of medical tourism in Thailand was a typical factor-driven phenomenon, where people traveled to obtain medical services with the lowest cost.

3.1.2 WHY THAILAND? - DRIVERS OF MEDICAL TOURISM AND THAILAND'S POSITION

There are various reasons why the patients choose medical treatment abroad. For example, the low cost is very attractive for people without health insurance (estimated to be 40 million in the United States²²) or even for those insured people with certain pre-existing conditions that are not covered by their insurance policy. Companies with privately funded health insurance policies are also attracted to the lower cost alternative, assuming a certain level of service is satisfied. People in a life-or-death condition with no options available in their own country would also be compelled to travel to find cure, as in the case of the Japanese baby in the previous section. These patients would indeed prefer a lower cost option, as long as the quality and service level requirements are met. In other cases, there are certain medical procedures that are not covered by insurance, such as cosmetic or elective surgery, laser vision correction (LASIK) and dental treatments.

Traveling abroad for medical treatment may serve other needs than lowering costs. For example, in some developed countries such as Canada, the United Kingdom and other European countries, patients were often placed in a long waiting list to get treatment under the national health care service.²³ For those patients who have to put up with an uncomfortable waiting period, time is of the essence and they would not mind traveling to get access to immediate treatment abroad.

Looking at those needs of the patients choosing to undertake medical procedures abroad, we can determine the primary driving forces of medical tourism. First, the patients are keen on the net health care costs including medical treatment and travel costs determined by the current exchange rate to their home currency. Second, they are sensitive to the quality and the standard of the medical

²² National Coalition on Health Care (NCHC), Facts on Health Insurance Coverage, <<http://www.nchc.org/facts/coverage.shtml>> (Accessed March 2006)

²³ Mattoo, A. & Rathindran, R. (2005) *Does health Insurance Impede Trade in Health Care Services?* World Bank Policy Analysis Working Paper 3667, 12. <http://www-wds.worldbank.org/servlet/WDS_IBank_Servlet?pcont=details&eid=000016406_20050719140725> (Accessed April 2006)

care. No one would risk their life and health in exchange for lower costs. Hence, first and foremost, the host country has to show that it can satisfy the patients' expectations of the level of services, in terms of both the facilities and the human resources. Third, they prefer a country with lower entry barrier to visit, both physically and psychologically; meaning the country would be better for them if it imposes fewer entry problems including visas, and if it provides a better country image for visiting, such as safety and sanitation. In this sense, the fact that Thailand is one of the most popular tourism destinations in the world (18th in the world, 3rd in Asia on the basis of export value, as we mentioned earlier) is a great advantage to attract patients. With its warm tropical climate, Thailand is a suitable place for treatment and recovery. It is also a safe and friendly place for foreigners, offering a wide array of tourist attractions that a patient can access after or during the medical treatment, depending on his condition and type of treatments. An Australian woman spoke after having all her teeth crowned for Australian \$17,500²⁴ (including air fares and accommodation):

“In Australia it would have cost me [Australian] \$1,100 per crown. My dentist said the quality of work was excellent. And the spa thing got to me. I am the worst person for going to the dentist, or even ringing one up. So the idea you could get a massage at the same time really appealed to me.”²⁵

In this case, the uncomfortable medical procedure was transformed into a pleasurable stay in a comfortable environment.

Looking more precisely at the strategy that each country takes in the medical tourism, we can picture a spectrum ranging from medical outsourcing, which contracts with a certain area of medicine in a developed country, at the extreme end of the spectrum, to the tourism motivated model at the other end, providing medical services during the tourists' stay.

²⁴ US\$1=A\$1.30, A\$ 17,500 = US\$13,462.00

²⁵ The Sidney Morning Herald, October 29, 2005 <<http://www.smh.com.au/news/national/a-slice-of-the-action/2005/10/28/1120400366897.html>> (Accessed March 2006)

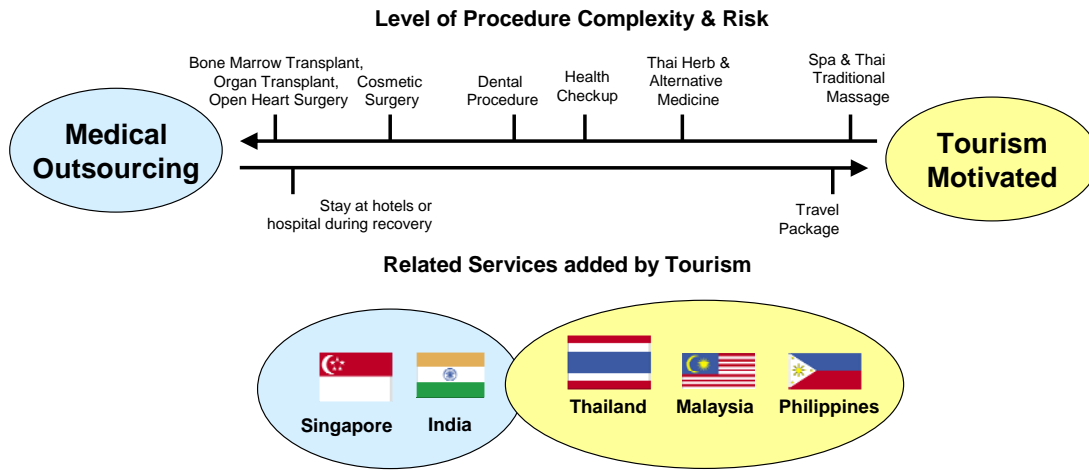


Figure 9: Model of Medical Tourism

As we described above, Thailand’s strength exists in the tourism related area such as spas, traditional massages, herbal treatments and other kinds of alternative medicine. Therefore, Thailand originally took its place in the right hand side of the spectrum together with its neighboring South East Asian countries. But recently, led by some leading private hospitals including Bumrungrad, it has been shifting towards the left by taking on more complex medical procedures. On the other hand, Singapore has been a leading country on the left hand side with its advanced biotech and healthcare cluster. India has also emerged recently, offering medical outsourcing with lower costs. India is also pioneering a medical contract outsourcing industry, which entails the outsourcing of a hospital’s administrative work, such as accounting and insurance claim processing. Below is a cost comparison of major medical procedures in these countries.

Table 2 Cost Comparison²⁶

Types of Treatment	U.S.	Singapore	Thailand	Malaysia	India
Cardiac Procedure	50,000	30,000	13,500	NA	4,500
Hip Replacement	35,000	NA	12,000	6,000	6,500
Face Lift	10,000	NA	4,000	2,500	2,600

²⁶ Author’s analysis using data from India Brand Equity Foundation and MedRetreat

3.2. MARKET SIZE AND GROWTH OF THE MEDICAL TOURISM

3.2.1 NUMBER OF THE PATIENTS

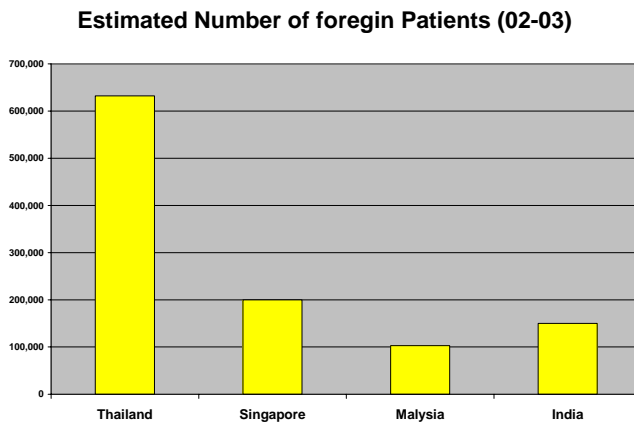


Figure 10 Number of Foreign Patients in various countries

Figure 10 shows the number of the international patients treated in Thailand and its neighboring rival countries. In 2002, Thailand invited 632,320 foreign patients, several times more than its rivals in the region.

Figure 11 is a breakdown by the country of the patient origin. The biggest component is patients from Asia and neighboring countries with nearly 60% share. The second largest share (nearly 30%) was held by the expatriate residents in Thailand. This portion includes both the long-term staying tourists and foreign workers with their families. Most of the successes in inviting the long-term visitors are the outcomes of Tourism Authority of Thailand's campaign mainly targeting the retired Japanese aged, while the increase in expatriates was the result of invitation of FDI. It seems that those policies are taking the role of promoters of medical tourism of Thailand. The third position was taken by Europe with 10% share, but these patients from other parts of the world are limited in number.

Figure 12 is the data demonstrating the growth by patient's nationality (including the expatriates) between 2002 and 2004. Traditionally Japan has been the biggest market, but recently the neighboring ASEAN countries and the Middle East countries are booming. The booming of the Japanese patients reflected the region's relative quick recovery and rapid economic growth since the 1997 crisis. The increase in patients from the Middle East is interpreted that the people who

traditionally had gone to the United States were diverted to Thailand and other countries in this region due to the difficulty of getting U.S. visas since the 9/11.

Foreign Patients Seeking Treatment at 33 Private Sector Hospitals in Thailand in 2002

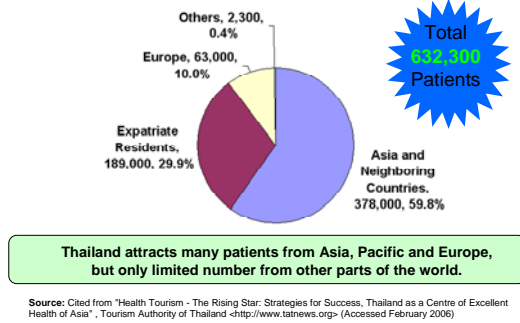


Figure 11: Number of Foreign Patients Seeking treatment in Thailand 2002

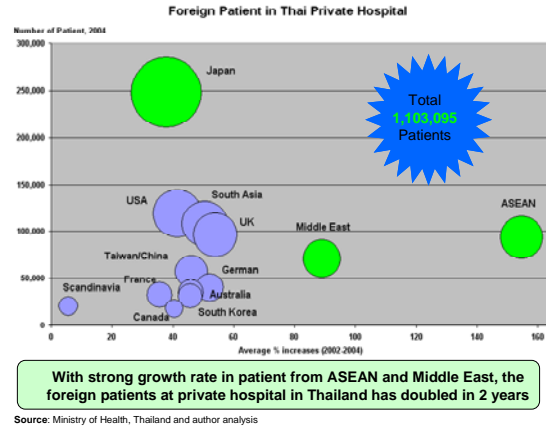


Figure 12: Growth in number of patient

3.2.2 COMPETITIVE LOCATION IN ASIA AND ELSEWHERE

The breakdown by the country of origin of the patients mentioned above goes along with the tendency of attracting many more patients from the geographically proximate countries.

Table 3 Medical Tourism in the developing world

Country	Estimated number of foreign patients ('02-'03)	Countries of origin of foreign visitors	Treatments sought by foreign visitors
Thailand	632,000	South and South East Asia, Europe, and the US	Cardiac surgery, post-op care, cosmetic surgery, dentistry, cataracts, bone-related procedures
Singapore	200,000	South and South East Asia, Korea, Japan, Australia, the UK and the US	General surgery, cardiac surgery, ophthalmology, orthopedics, gynecology, urology
Malaysia	103,000	Indonesia, India, Middle East, and the UK	Cardiology, hematology, gastroenterology, neurology, cosmetic surgery
India	150,000	Bangladesh, Middle East, the UK, Europe, and the US	Cardiac surgery, joint replacements, ophthalmology, alternative medicine
Jordan	N/A	Yemen, Sudan, Libya, Algeria, Tunisia, and Iraq	Cardiac surgery, correction of spinal injuries, cornea transplants, alternative medicine
Cuba	N/A	Central and Latin America, and the UK	Cosmetic surgery, vitiligo treatments, ophthalmology, joint replacements, neurology

Source: Mattoo, A. & Rathindran, R. (2005) Does health Insurance Impede Trade in Health Care Services? World Bank Policy Analysis Working Paper 3667, 12.

From Table 3 above, Thailand’s main market roughly overlaps with those of Singapore, Malaysia and India. However, there are slight differences in each country’s area of strength. While Singapore is strong in a wide variety of medical procedures, other countries have relatively specific areas such

as post-op care and cosmetic surgery (Thailand), gastroenterology (Malaysia), ophthalmology and alternative medicine (India), cornea transplants (Jordan), cosmetic surgery and vitiligo treatment (Costa Rica, Cuba).²⁷

3.3.3 POTENTIAL GROWTH OF THE MEDICAL TOURISM MARKET

According to Thailand’s Ministry of Public Health, hospitals in Thailand were estimated to earn 19.826 billion baht (approx. US\$500 million: US\$1 = 40baht) from 730,000 foreign patients in 2003.²⁸ It is very difficult to compare this figure with its main competitors or to estimate Thailand’s share in the world market, because there is no standardized statistics on medical tourism revenue in each country. The World Bank conducted a research to estimate the future potential growth of this cluster by calculating the savings if 10% of US patients (656,0000) underwent surgery abroad instead of in the United States for fifteen major non-emergency medical procedures.²⁹

Table 4 Estimating the gains and the impact to the world market of trade in health services

Procedure	US inpatient price (\$)	US inpatient volume	US outpatient price (\$)	Estimated US outpatient volume	Average of three lowest foreign prices including travel cost (\$)	Saving if 10% of US patients undergo surgery abroad instead of in the US	Additional medical tourism market if 10% of US patients undergo surgery abroad instead of in the US**	Additional patients treated abroad if 10% of US patients undergo surgery abroad instead of in the US**
Knee surgery	10335	399139	4142	60000	1236	380604366	56,749,580.4	45,913.9
Shoulder Arthroplasty	5940	23300	7931	NA	2204	8704809	5,135,320.0	2,330.0
TURP	4127	111936	3303	88064	2385	27581317	47,700,000.0	20,000.0
Tubal Ligation	5663	78771	3442	621229	1248	171065574	87,360,000.0	70,000.0
Hernia Repair	4753	40553	3450	759447	1608	152655706	128,640,000.0	80,000.0
Skin lesion excision	6240	21257	1696	1588884	812	151952860	130,743,449.2	161,014.1
Adult Tonsillectomy	3398	17251	1931	102749	1010	13588218	12,120,000.0	12,000.0
Hysterectomy	5783	640565	5420	NA	1869	250704845	119,721,598.5	64,056.5
Haemorrhoidectomy	4945	12787	2081	137213	781	23160663	11,715,000.0	15,000.0
Rhinoplasty	5050	7265	3417	NA	1906	2284315	1,384,709.0	726.5
Bunionectomy	6046	3139	2392	41507	1487	5186290	6,638,860.2	4,464.6
Cataract extraction	3595	2215	2325	1430785	1133	171078116	162,358,900.0	143,300.0
Varicose vein surgery	7065	1957	2373	148043	1393	15618521	20,895,000.0	15,000.0
Glaucoma procedures	3882	NA	2292	75838	1017	9670440	7,712,724.6	7,583.8
Tympanoplasty	4993	754	3347	149246	1261	31408685	18,915,000.0	15,000.0
Total						1415264725	817,790,141.9	656,389.4

Source: Mattoo, A. & Rathindran, R. (2005) Does health Insurance Impede Trade in Health Care Services? World Bank Policy Analysis Working Paper 3667, 12. and column that has ** (in yellow) are Author's calculation.

²⁷ As for Costa Rica which is not included in the World Bank Working Paper (Mattoo & Rathindran, Ibid.), we referred to Discover Costa Rica. <http://www.discover-costa-rica.com/i/medical_tourism.php?mid=2> (Accessed May 2006)

²⁸ Tourism Authority of Thailand. Health Tourism – The Rising Star: Strategies for Success, Thailand as a Center of Excellent Health of Asia. <<http://www.tatnews.org/common/print.asp?id=1983>> (Accessed February 2006)

²⁹ Mattoo & Rathindran, Ibid. 20.

Using this data, we calculated US\$818M in total potential incremental revenue from the US market alone. Considering that this is data from only one country, there is significant potential revenue that can be realized from medical tourism in the future.

3.3. CLUSTER MAP

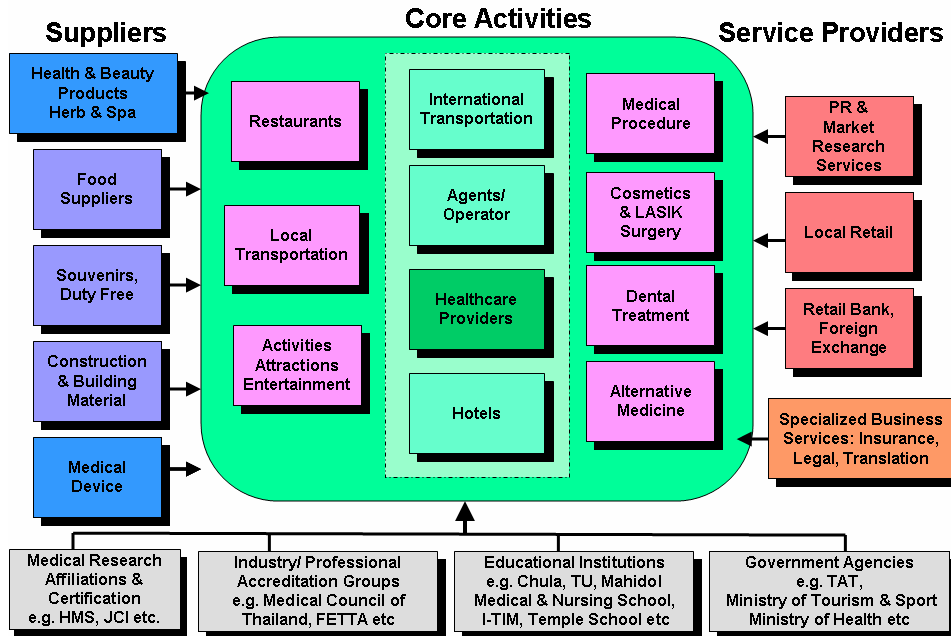


Figure 13 Medical Tourism Cluster Map

Medical tourism is a newly emerging cluster, which lies in the intersection between the tourism and medical cluster. Medical tourism’s overlap of the two clusters can be seen from the core activities of this cluster, which consist of activities from both the tourism and medical cluster. The tourism part of this cluster can be seen in the left and center part of the map, including the international and local transportation, tour agents and operators, hotels, restaurants and other tourism activities, attractions and entertainment. As we mentioned before, historically, Thailand has had a strong position in these areas. The medical part of this cluster spreads from the right to center part with health care providers including leading private hospitals, cosmetic and LASIK surgery,

dentistry, and alternative medicine, including the famous Thai massage and herbal treatment. Except for the hospitals, who are an emerging player, the other sectors have been very active in Thailand.

Attention should be paid to the supporting players at the bottom, including:

- 1) Medical research affiliations and certifications: The second largest private Bangkok hospital is affiliated with Harvard Medical School for staff training; Bumrungrad is accredited by Chicago-based accreditation institution, Joint Commission International.
- 2) Educational Institutions: National leading Chulalongkorn and Thammasat Universities, Mahidol Medical School; International Tourism Industry Management School led by leading Dusit Thani Hotel Group; Wat Pho Temple-affiliated traditional massage school.
- 3) Government Agencies: Ministry of Health and Ministry of Tourism and Sport with its affiliation, Tourism Authority of Thailand, which has fifteen offices abroad to invite many more tourists. In fact, Thai government has launched a campaign for Thailand to be the “Medical Hub of Asia,” emphasizing a combination of the recently-emerging medical industry with the traditional strength such as spas, traditional massage and herbal treatment.

However, there is a weak part of the supporting players: IFCs. Thailand actually has IFCs in fields related to medical tourism: Medical Council of Thailand and the Federation of Thai Tourism Association, corresponding to the medical and the tourism areas, respectively. But these are industry-oriented IFCs, and not cluster-oriented. There is little collaboration of activities between these two associations to promote medical tourism.

3.4. MEDICAL TOURISM CLUSTER DIAMOND ANALYSIS

Thailand’s medical tourism cluster diamond as shown in Figure 14 mirrors the advantages and challenges faced by the country.

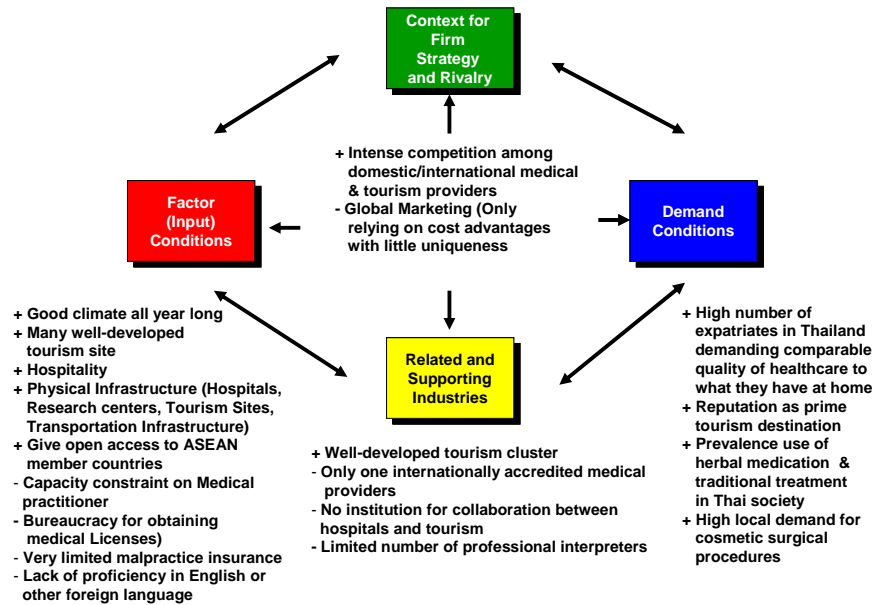


Figure 14 Medical Tourism Cluster Diamond Analysis

With a large number of expatriate patients demanding high quality medical service, and also a long history of high demand for sophisticated plastic surgery from the domestic market, **demand conditions** are quite strong. **Factor conditions** are good with a clear commitment by the government to enhance its position as a tourist destination by combining it with the government's Universal Health Plan to provide the necessary infrastructure for the medical tourism cluster to thrive. Similarly, medical tourism enables Thailand to diversify out of its existing strengths in **related and supporting industries** – tourism. In the **context for firm strategy and rivalry**, Thailand has intense domestic and international competition which pushes current players to maintain and upgrade their services.

FACTOR (INPUT) CONDITIONS

As described earlier, Thailand has been assembling the various factor inputs necessary for a thriving medical tourism cluster. These pieces can be broadly classified as (i) suitable infrastructure; (ii) nice environment, people and culture; and (iii) government's key policy.

Infrastructure: Thailand has 12 medical schools which can produce approximately 1,000 doctors per year³⁰. The country now has 1,345 hospitals nationwide. In Bangkok there are 53 public hospitals³¹ and there are about 23 private hospitals, 7 plastic surgery clinics, 7 dermatologists, 6 vision LASIK clinics, and 4 dental clinics are advertised to offer medical tourism. In Phuket, there are 7 private hospitals, 2 plastic surgery clinics, and 7 dental clinics providing medical tourism services³². Public hospitals don't get involved in medical tourism.

Hospitals in Thailand utilize modern medical technology such as ultrasound and the X-ray computer. However, the use of modern medical technology, especially high-tech medical equipment, is confined primarily to big cities and the private hospitals, rather than the public hospitals, which explains why public hospitals cannot compete with private hospitals in this cluster.

Environment, People and Culture: Thailand has good climate all year around along with many well-developed tourism attractions. Service excellence and hospitality are vital assets and key differentiating factors attributed to medical tourism. This is complemented by the friendly and caring nature and gentle ways of the Thai people. Providing high quality of services to customers is part of the Thai culture.

Government's Key Policy: As mentioned before, Thai government plans to develop its health care industry as a medical hub in Asia. However, there are some limitations, including: administrative "red tape" in issuing practicing licenses, a wide gap between the local demand for medical services and supply of medical practitioners, very limited malpractice insurance and a lack of proficiency in English or other languages by the locals.

³⁰ Directory of Medical School in Thailand <www.iime.org/database/asia/thailand.htm> (Accessed April 2006)

³¹ Thailand in Brief <www.prd.go.th/ebook/inbrief/society/society_05.html> (Accessed April 2006)

³² Medical Holiday: Thailand Hotdeal.com <www.thailandhotdeal.com/index.cmf?menuid=275> (Accessed April 2006)

DEMAND CONDITIONS

There are four key sources of demand for medical tourism in Thailand. (i) Due to its **high number of expatriates** mostly living in Bangkok, and **over 10 million tourists** arriving per year (10.13 million in 2001, 10.87 million in 2002, 10.08 million in 2003, and 11.23 million in 2004)³³, Thailand has to provide comparable quality of healthcare to what those expatriates and tourists have at their home countries. (ii) Thailand has strong **local demand for cosmetic surgical procedures**. (iii) In Thai society, there's **prevalence use of herbal medicine and traditional treatment**. (iv) Thailand has been enjoying reputation as **prime tourism destination**. At the beginning, a lot of westerners wanting cosmetic surgical procedures with a high degree of privacy would tell their family and friends that they are going to Thailand for tourism instead of medical care.

RELATED AND SUPPORTING INDUSTRIES

Well-developed tourism cluster is the related and supporting industries. After medical treatment, often surgery, patients usually are arranged to stay in 5-star hotels or villas, go shopping and tour during the recovery period. But so far, there's no institution for collaboration between hospitals and tourism.

CONTEXT FOR FIRMS STRATEGY AND RIVALRY

There's intense competition among domestic and international medical and tourism providers. In Asia, Singapore and India are the two major competitors. If Thailand's value proposition is limited to a pure cost advantage without any unique strength or value added, Singapore or India will capture Thailand's market share in the near future.

As mentioned before, Thailand had the first internationally accredited hospital in Southeast Asia in 2002, but there have been no new accreditation made to Thai hospitals since then. On the other hand, Figure 15 shows that both India and Singapore have taken an aggressive stance to obtain

³³ Global Market Information Database, Harvard University

international accreditation for their hospitals. In 2005, Singapore had seven hospitals internationally accredited, which made a total of nine Singaporean hospitals meeting international standard.

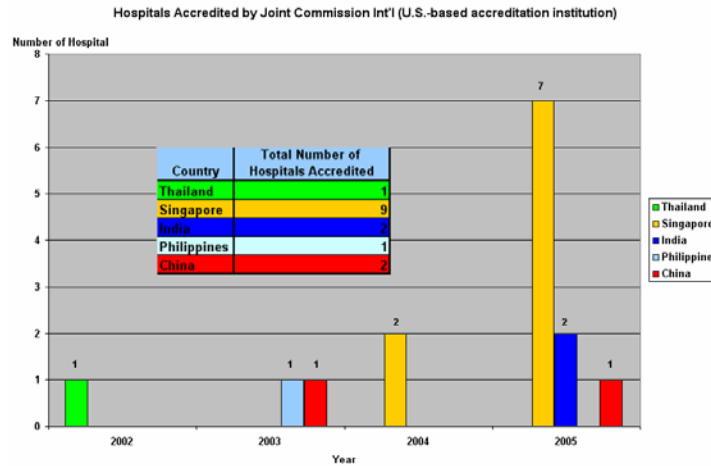


Figure 15 Hospital accredited by JCI

SECTION 4 STRATEGIC ISSUES FACING THE CLUSTER

The World Bank paper mentioned four major impediments hindering future growth of medical tourism.³⁴ First, the insurers concern about the quality of overseas providers and malpractice law, which may lead to an increased cost to the insurers if the treatment worsens the patient’s health problems rather than correcting it. Second, insurers may face high costs of monitoring care received overseas. Third, public health care schemes, such as Medicare and Medicaid, do not usually allow patients to undergo medical procedures abroad under the Social Security Act. Finally, there is no strong incentive to cover services abroad in a highly oligopolistic insurance market. These issues will be hurdles hindering the future expansion of the medical tourism market. Specifically for Thailand, the country is facing several key challenges:

SUSTAINABILITY ISSUE

Can the medical tourism cluster have sustainable growth? It depends on the medical resources that individual nation has available. Table 5 shows medical resource distribution in

³⁴ Mattoo, A. & Rathindran, R. (2005) Ibid. 21-23.

different Asian countries. The Philippines, Thailand, and India all have a serious shortage of medical professionals, compared to Japan, Singapore, and Taiwan. If these countries fail to meet the demand of their populations for quality healthcare services, they will face serious social and political challenge. Their citizens will question why the best doctors, best medical devices, and best services are given to foreigners instead of nationals. To increase the supply of medical professionals and narrow the gap between supply and demand, these countries have to lift nationalistic bans that prevent foreign practitioners from obtaining licenses to practice. They need to attract more people to work there, especially with competition intensifying among domestic and international medical and tourism providers.

Table 5 Ratio of Medical care Resources to Population in 2004

	Population	Per doctor	Per nurse	Per hospital/ clinic
China	1,295,229,430	765.5	1,059.9	20,793.5
India	1,073,344,690	2,174.6	1,761.2	67,353.5
Japan	127,738,060	559.1	113	738.5
Malaysia	25,581,100	-	-	-
Philippines	82,715,670	29,269.5	14,397.8	47,212.1
Singapore	3,478,180	536.2	246.8	119,937.0
Taiwan	22,627,990	712.5	238.0	1,244.6
Thailand	61,248,980	3,017.6	748.5	16,025.3

Sources: Euromonitor International from national statistics/UN

On March 24, 2006, the Ministry of Health of Singapore, in conjunction with the Singapore Medical Council (SMC), announced that they will begin recognizing more top foreign medical schools in order to attract a larger number of good foreign doctors to work in Singapore. As Singapore promotes itself as a regional medical hub and a hub for world-class biomedical research, they believe they will need more doctors to match supply and demand, an important strategy to avoid escalating healthcare cost to the population³⁵.

³⁵ Ministry of Health Singapore: About MOH: Newsroom: Press Releases
www.moh.gov.sg/corp/about/newsroom/pressreleases/details.do?id=36798500 (Accessed April 2006)

OPERATIONAL ISSUE

There is still little attention paid by the hospitals to this cluster. At the moment, almost all hospitals use their marketing division to handle medical tourism requests and don't have a dedicated division to handle its medical tourism business. Not having a dedicated contact person to coordinate and an executive to make pricing decisions on medical costs makes it difficult for a potential patient, who doesn't speak Thai and live in different countries, to establish contact and perform follow up inquiries. Long turn around times to respond to inquiries, a lack of transparency to the patients, difficulty in communication and inefficient processing of administrative tasks are problems that stifle the growth of this cluster.

INSURANCE PACKAGE ISSUE

Medical services carry high risk, as they may impact life and well being. When this service is provided by a foreign practitioner in a foreign country, usually the perceived risk is even greater. This is one concern that could negatively impact the growth of medical tourism because there aren't any sophisticated cross-county insurance packages available, which could protect the interests of both patients and doctors.

RISING FUEL PRICES

The skyrocketing fuel cost has a significant impact on travel cost. An increasing cost to travel could offset the favorable exchange rate benefit and the cost advantage of medical services in Thailand.

SECTION 5 RECOMMENDATIONS

Thailand still enjoys the benefit of being the first mover in medical tourism with strong factor and demand conditions. However, it needs to improve the context for firm's rivalry and competition and also strengthen the related and supporting industries. The Thai government has the great vision

of being both the Medical Hub of Asia and the Tourism Capital of Asia. Although, the concept of medical tourism is perfectly aligned with those dreams, the government hasn't taken an active stance to develop this nascent cluster and integrate it into the two visions.

From the perspective of the firms in the cluster, there are a few things that should be done to improve the competitiveness of the cluster: (1) **Enhance the capacity of medical service providers by getting more international accreditation and affiliation** for both hospitals and medical professionals. Thai hospitals could send doctors and nurses to world-class medical centers, such as Harvard Medical School or Johns Hopkins, for on-the-job training, which could improve the quality of the medical professionals. (2) **Tie up with Thai traditional alternative treatment to enhance cluster uniqueness** in the face of global competition. Combining the Thai traditional arts of healing with contemporary Western medical treatment could create a unique value proposition that will attract patients. (3) **Perform annual benchmarking analysis** against other international players. This will allow Thai hospitals to be constantly aware of what the competition is doing and therefore able to position themselves accordingly, staying ahead of everyone else. (4) **Reach out and cooperate with agents, hospitals, and insurance companies** more aggressively in its target market. So far, Thai hospitals have been passively waiting for foreign travel agents and patients to contact them. They need to be proactive in establishing contacts with these agents, especially since the Singaporean government and hospitals have begun to actively contact agents³⁶ in various countries, establishing presence and reaching out to potential clients (5) **Formulate medical tourism IFC** in Thailand. As noted before, there aren't any cluster-oriented IFCs for medical tourism in Thailand. An organization that cuts across both the medical and tourism clusters can facilitate communication and cooperation between players in the two existing clusters and improve the overall performance of this new cluster. (6) **Build a follow up system** for post-treatment monitoring and evaluation of patients' satisfaction, which is an important tool to facilitate process improvement initiatives.

³⁶ Interview with Judon Anglin, Managing Director of MedRetreat. April 2006

From the point of view of the Thai government, there are also a few steps that they should take: (1) **Encourage and support medical service providers and doctors to get international accreditation and affiliations**, not only to promote its brand internationally, but also to enhance transparency and win customers' trust. (2) **Enhance the legitimacy of Thai traditional medical treatment by testing and verifying** the efficacy of herbal medicine and centuries-old healing methods. Despite the fact that the Thai herbs and other alternative treatments have proven to be very useful, they exist only as alternative medicine and treatment and have lacked support and development. If the Thai government can develop a system for an FDA-like standard, it will greatly increase the credibility of these treatments and reassure the patients receiving them. (3) **Promote Thailand as the world leader in medical tourism more aggressively**, improve Thailand's image as a clean, healthy and safe travel destination, and educate the rest of world about its medical tourism cluster. (4) **Play a leading role in establishing medical tourism IFCs** to allow cooperation and coordination between the public and private sector. An aligned strategy between both sectors would significantly enhance the competitiveness of this cluster. (5) **Collect and setup a thorough database** to monitor the progress of the cluster and improve its transparency and creditability. An abundant and accessible database would also encourage academia to conduct more researches and propose suggestions for improvement. (6) **Reduce red tape bureaucracy**. Allowing foreign medical practitioners to take the license exam in English, instead of Thai, would attract more foreign medical practitioners to work in Thailand and prevent them from going to competing countries, such as Singapore or India. This will allow Thailand to increase the quantity as well as quality of its medical practitioners. (7) **Establish a special insurance system for medical tourism**, with a special focus on malpractices. If the Thai government can negotiate for a cross-border insurance package with the patients' home countries, this would increase Thailand's credibility as a medical tourism destination.

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Required Disclosures:

1. Vijak Sethaput is nationals of Thailand and has resided in Thailand for an extended period of time.
2. Koichi Miyazawa worked in Thailand from 1998-2001
3. Judson Anglin is a husband of Vijak's cousin.