

An empirical study on the relationship between medical tourism and the GATS commitments

— Do the GATS commitments work as a supporting actor in the medical tourism industry?

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Introduction

Medical tourism industry is an emerging industry in recent years and both advanced and developing countries are involved in this field. Medical tourism destinations can be divided into two groups, one group is advanced countries in which patients are ought to obtain better care unavailable at home, such as those residents that come from developing countries like China and East-southern Asia countries. Another group is developing countries that patients from developed countries prefer to receiving treatment less expensive than at home. The major push factor for medical tourism is the rising health needs of an ageing population which turn to be the major demand for medical care outside the developed nations. And the major pull factors for medical tourism are cost-effectiveness and availability of services on demand in combination with the unique features offered at a destination, for instance Thailand is popular for Japanese patients that it provides high quality care with favorable environments for recuperation and cultural sensitivity.

In present, East-southern Asian countries put effort on developing medical tourism, especially like India, Singapore, Thailand and Malaysia. The biggest attractive point to receive treatment in Southeast Asia is the low cost, compared with European countries, America and Japan. Also, with the low cost, they provide surgeon and treatment services at the level of world standard. More, India, Singapore and Malaysia are English countries so there are not any language barrier problems. With these reasons, many European and American patients come to receive treatment. Doctors are trained abroad and are available to provide cutting-edge medical treatments.

Health service trade such as medical tourism industry is globally growing rapidly under the situation of increased international mobility of service providers and patients, developments in information technologies and an expanding private health sector, while the health systems are domestic, so that the effects of medical tourism in destination countries especially on policy implications cannot be ignored. First, medical tourism can be seen as a user of public resources, that it consumes public health care resources in destination countries through redirecting them to the private sector. Second, medical tourism can also be understood as a revenue generating industry as a

form of health services trade. Third, medical tourism can be seen as setting a standard of care. By seeking accreditation, destination countries may develop a Western-oriented standard of care, including in facility aesthetics. Finally, medical tourism is also a source of inequity. Within destination countries, it can contribute to an internal brain drain of trained medical workers from rural to urban areas and from the public to the private sector. These all changes in destination countries may stimulate government's willing to develop medical tourism industry or may worry governments since the foreign health care investor will monopoly the health care markets. Thus, scheduling a commitment on GATS (General Agreement on Trade in Services) will be a worth considering option of public policy implication in order to protect domestic health systems from monopolization by foreign investors in the health sector.

Research methods and frameworks

Trade in health services including medical tourism is officially provisioned under the General Agreement on Trade in Services (GATS). The GATS creates a legal framework for liberalizing global trade in services, such as education, healthcare, and so on. The WTO secretariat's service sector classification includes hospital services, other human health services, and professional services including services provided by physicians, nurses, and other health professionals, and insurance. In addition to covering all types of services, the GATS applies to four modes of supplying services while medical tourism is provisioned under the mode 2- consumption of services abroad.(countries which schedule the GATS)

As far, the role of the GATS is seen as an instrument to add credibility and predictability to existing regime and, lower, the risk barrier of potential investors. Governments may have incentives to schedule GATS to control the foreign capital in the health sector that could make health services trade formally and credibly, while in another hand, they may also have incentives not to schedule it in order to remain more freedom for policy implications in medical tourism industry.

I want to use a case study to find out their correlation. A statistical approach is best preferred but with the data limitations, it will bring about a huge basis on estimation, therefore this research will

use a framework based on a case study.

Hypothesis

To observe GATS commitments do support the medical tourism by comparing dependent variables under the control of control variables.

Research experiments

Since there are data limitations on medical tourists, only some East-southern countries are data available so that three countries-Malaysia, Singapore, and Thailand are considered as research samples for reasons that their control variables are similar. And this research is based on data from 2002 to 2008.

Variables

1. Explanatory variables

GATS's Commitments

The main explanatory variable can be considered as a dummy variable for whether a country schedules the commitments of GATS about mode 2 or not in order to show the correlation between GATS agreements' effect on medical tourism.

2. Dependent variables

Visits of foreign patients

In this research, numbers of foreign patients accepted per year are chosen to be the main variables in order to estimate developments of destination countries' medical tourism.

3. Control variables:

There are several control variables in this analysis and they are divided into two groups. One group contains indicators from the country view, and the other group shows indicators about hospital services in details.

Health system I: Countries' health policy

A country's health policy could be considered as an explanatory variable like whether it has a bilateral agreement with other countries about health service trade, or whether it is a member of

regional union. For example, the ASEAN Framework on Agreement on Trade in service (AFAS) sets up a dispute settlement mechanism recently, and the ASEAN members will cooperate in the area from disaster preparedness for natural disasters and infectious disease outbreaks to non communicable diseases, maternal and child health and primary health care. So that though in ASEAN, agreements concerning the medical industry have not been signed yet, it gives the countries more freedom to develop investments in the health sector in ASEAN. As a result, foreign direct investments get significant profits and conquer the healthcare services in destination countries.

Health system2: Delivery in private sectors

Delivery in private sectors is the basis of medical tourism industry, because in public sectors, health services costs are covered by the government so that in the mostly cases, the demand of public healthcare services is too big and patients should wait for the treatments. But private hospitals are smaller in size and tend to be located in urban areas, serving middle to high income patients as well as foreign patients. So if a country is covered by private hospitals it means that it can supply qualified health services fast for the foreign recipients and thus it stimulate medical tourism industry.

Health system3: Human resources

The destination country can create a virtuous circle in developing medical tourism industry like it will be capable to provide high quality health services for the foreign patients that brings medical tourism's growth if the country has adequate human resources and specialists, so that in consequence, the medical tourism industry's acceleration reduces international emigration of health workers, particularly of specialists which as a result, the medical tourism industry continuously grows.

Hospital medical treatment1: Cost of treatments

Since low cost is those three countries' common attractive indicator on medical tourism, it is necessary to check the differences of treatment costs to control their difference on medical tourism markets.

Hospital medical treatment2: Level of medical treatment services

While, in the case of Southeast Asian countries' medical tourism, hospitals that receive foreign patients are ought to complete surgeons or other medical treatment beyond a certain standard which can at least satisfy patients.

Hospital medical treatment3: Language services

Some countries' hospitals provide foreign language translation services and their hospital works especially doctors, can speak in English. As mentioned above, those countries' which can solve the language barrier problems may seems more attractive in the eyes of medical tourists.

Accessibility: Democracy

Democracy can be seen as a signal of correct information accessibility and safety of foreigners, so that patients tend to choose to travel to a country that has high democracy that can provide well information for health service and safe environments for recuperation.

Data and resource

Statistics about visits of foreign patients are picked up from ministry of health in three countries and information about GATS commitments comes from service database in the homepage of WTO, also data of control variables' such as delivery in private sectors- numbers of private beds available and human resources- number of private doctors come from yearbook of statistics in three countries. And information about hospital services refers resources from medical tourism consulting networks and research down by Japanese research institute.

Result

1. Explanatory variables

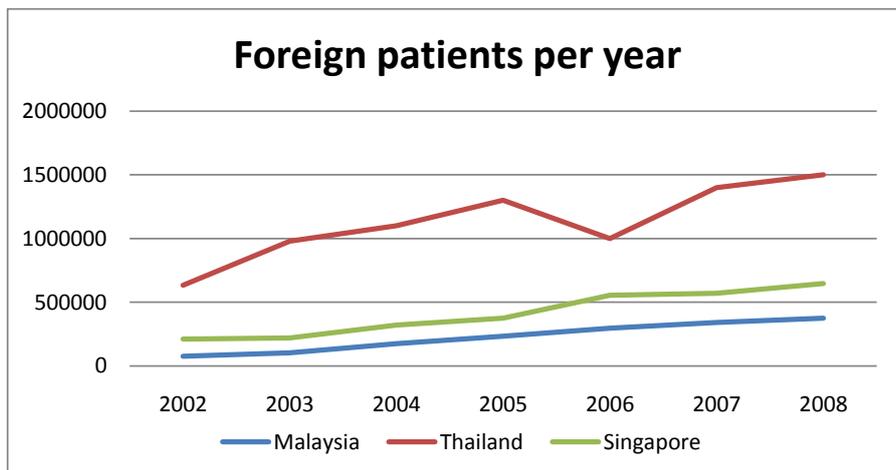
From WTO's services database, we find out that only Malaysia schedule mode2 on sectors of health related and social services about hospital services private hospital services. In addition, Malaysia also schedules mode3 on limitations that only through a locally incorporated joint-venture corporation with Malaysian individuals or Malaysian-controlled corporations or both and aggregate foreign shareholding in the joint-venture corporation shall not exceed 30 per cent, and the joint-

venture corporation shall operate a hospital with a minimum of 100 beds¹, which could be considered as a sign to control foreign investment. Other two countries do not schedule any modes in the sector of health related and social services.

2. Dependent variables

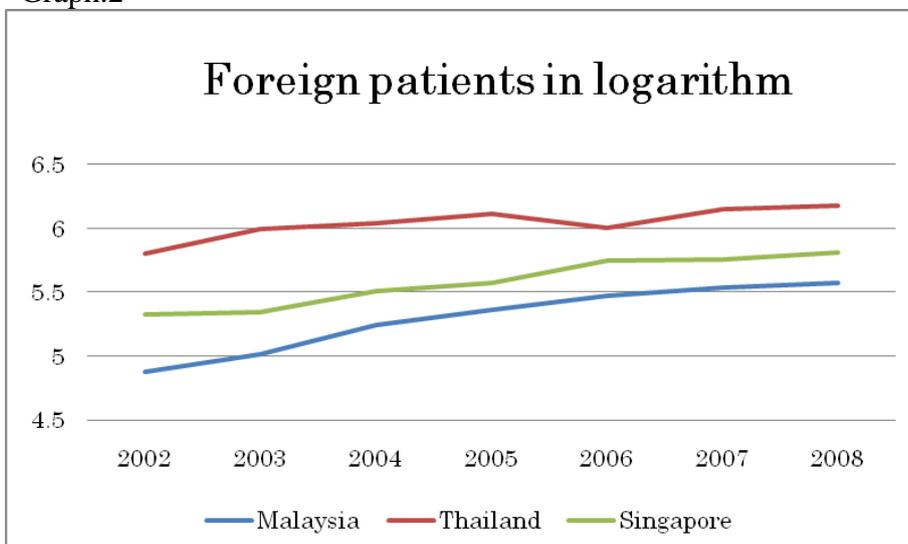
From 2002 to 2008, Malaysia's medical tourism market grows 30% per year, which grows fastest among three countries. Because the original scale of medical tourism industry differs in three countries, so it is somehow difficult to perceive their growth traits from graph1, so that I take logarithm of foreign patients' numbers in graph2 and clearly Malaysia has the sharpest growth line.

Graph.1



Source: APHM, ministry of Singapore, Ministry of Thailand.

Graph.2

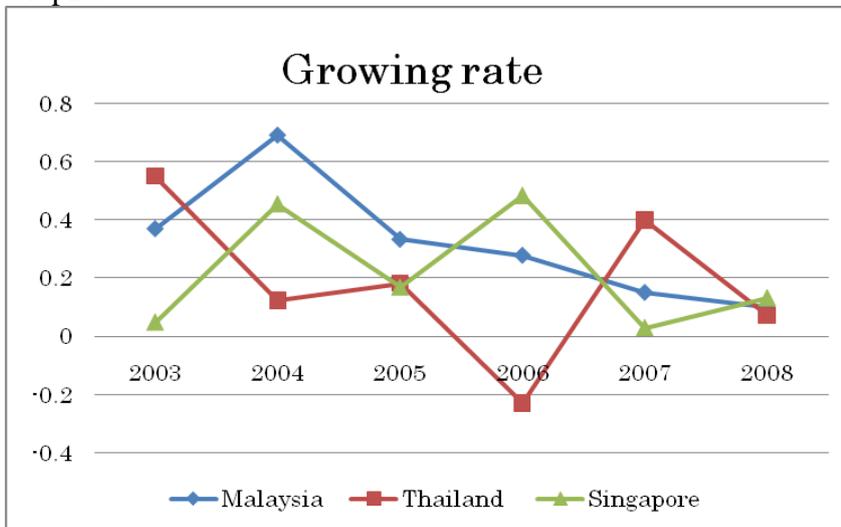


Source: APHM, ministry of Singapore, Ministry of Thailand.

¹ Service database in the homepage of WTO.

Graph3 shows three countries' growing rate from 2002 to 2008. Malaysia' average growing rate is 32%, while Thailand is 18% and Singapore is 22%. From survey of Association of Private Hospitals of Malaysia (APHM), Singapore patients share 10% of all foreign patients who received treatments in Malaysia at 2007, while at the same time; Indonesia patients share 72% of all foreign patients.

Graph.3



Source: APHM, ministry of Singapore, Ministry of Thailand.

In conclusion, even though Malaysia's medical tourism scale are the smallest, its growth from 2002 to 2008 are the most significant from three graphs above.

3. Control variables

Health system1: Countries' health policy

Medical tourism in Asian countries developed fast after the financial crisis in 1998. All of these three countries received serious damages such as the decline in tourism industry, trade and foreign direct investment. In order to attract foreign capital, governments implicated policies to promote medical tourism, while this could be the start of East-southern Asian medical tourism industry's developments. In this analysis, three countries belong to the same regional union- ASEAN, so that services trade liberalization can be seen as a controlled variable. Thus this part of the analysis will mainly focus on the government policies in three countries.

Thailand

In Thailand, medical tourism is considered more as a way to attract foreigners to Thailand rather than a solution for domestic health system problem. Specifically, under the Takshin regime, the declaration of "Health capital of Asia" was made to promote private hospitals receiving foreign patients in 2003, in continuing, 'Medical hub Plan' was published with a purpose on promotion on industry of spa and massage combined with attracting foreign patients. As a result, the visits of foreign patients increase 2 times in five years from 2001 to 2005.

However, after governments' changes in Surayutto regime in September 2006, the budget for medical tourism development was cut off from 10000 - 20000 to 300 million bahts. Also exhibitions and forums for Medical Hub are negotiations are relegated to a stop.

Singapore

In 2003, Singapore government announced 'Singapore Medicine Plan' which ensures a budget of 210 thousand Singapore dollars for medical service's promotion. Also in the same plan, it raise a target to expand its' medical tourism industry market into 1 million patients per year in 2012 while in 2008, 646 thousand medical tourist has come.

In Singapore, medical tourism is seemed as a mean to sustain its medical technology by maintaining foreign capital into the country, which aims to improve the quality of healthcare through competitions in a position of hospital managements.

It is each hospital's effort in management that supports the expansion of market, while the government has not only minimal involvement.

Malaysia

After the Asian financial crisis in 1997, Malaysian government built up National Committee for Medical Tourism to attract new patients from foreign countries. The main indicator of medical tourism industry is also same in Malaysia as well as in India which is low cost of healthcare.

By providing health care to foreign patients with low price widely, Malaysian government tries to find out a breach for industrial structure shifting from manufactory industry dependency to service

industries. The government also enforces promotions for overseas trade and support customer acquisition activities overseas to pursue the development of medical tourism industry. In addition, the Ministry of Health in cooperation with private hospitals and travel agencies releases package products of medical tourism for foreign tourists who come to Malaysia.

To promote Malaysia as a medical tourism hub, the Malaysian Government offers tax incentives that include, 100% income tax exemption on revenues from foreign patients; Allowing foreign patients entering Malaysia for medical treatment on emergency via 'Visa on Arrival' to convert their status to social visit pass upon recommendation from the respective hospitals. Malaysia's healthcare industry is set to expand as a gateway for the Asia Pacific healthcare market as it positions itself to both foreign and local healthcare players. The industry's growth is projected to be driven by this region's large and flourishing middle-income population, supportive government policies, and the Malaysian government's proactive stance in promoting foreign direct investment within the industry.

Table.1 summarizes the organizational structure differences of health systems between three countries. In conclusion, Malaysia and Thailand's government implicated more policies than Singapore because their purpose to develop medical tourism is to solve their countries' insufficient demand problem while Singapore focuses more on market competitions to develop its medical technology and so on.

Table.1-Comparison of health systems of three countries

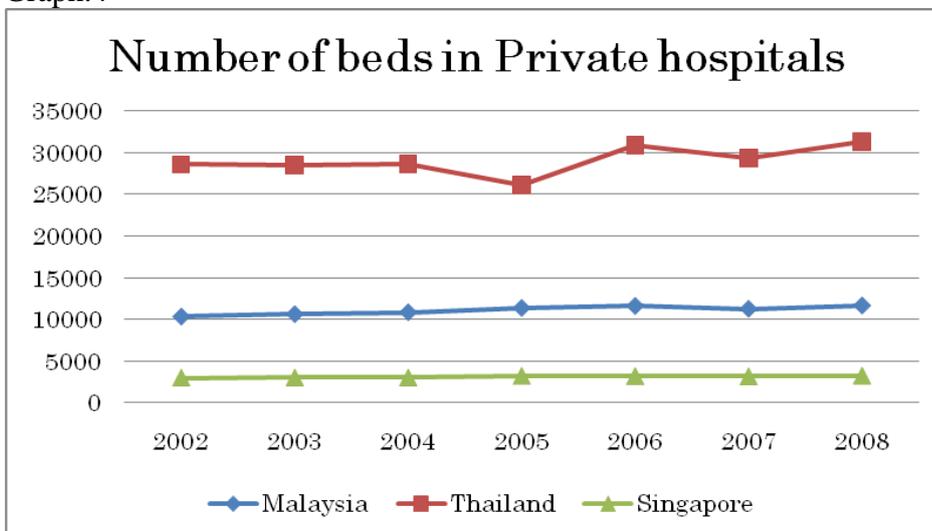
Country	Organizational structure	Policy implication	Policy impact
Singapore	Balanced public-private mix, corporatized public sector	Economic growth strategy to develop biomedical industries Regional service hub Medical R&D support	Narrow income gaps of public and private sectors
Thailand	Pockets of excellence in some private Bangkok hospitals	Regional health hub Extensive tourism infrastructure	Issues of growing inequity and urban rural divide
Malaysia	Growing private health sectors with movement of qualified workforce	Industrial strategy to develop tourism	Public-private divide Racial inequities between public and private sectors

Source: *Globalization and Health 2011*, 7:12.

Health system2: Delivery in private sectors

Graph.4 shows beds available in private sectors of three countries. Comparing the delivery with visits of patients, it shows correlations between delivery scale and demand from which Thailand's delivery is three times of Malaysia's. However, Singapore is smallest in delivery scale but its market is bigger than Malaysia's, in addition, neither country's delivery scale grow in a rate as high as visits of medical tourism's growing rate, which means delivery side does not effect on market importantly. Actually, in Malaysia, comparative low bed-occupancy is considered to be an attractive factor for there is no waiting list. Thus, this variable could seem to be controlled among three countries.

Graph.4

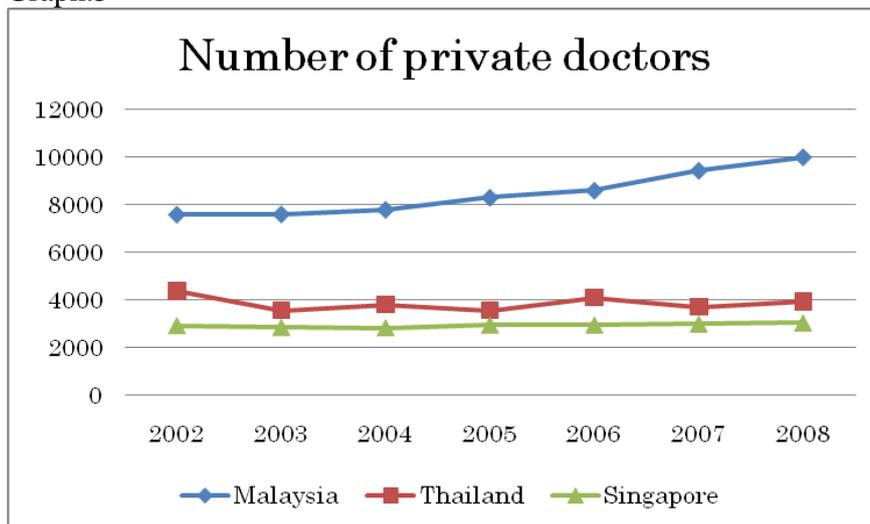


Source: Ministry of Health, Singapore, Thailand and Malaysia.

Health system3: Human resources and specialists

Approximately as same as the delivery in private sectors, no significant growth is observed in three countries, however, Malaysia has more private doctors than other two countries. This result may explain the reason why Malaysia's growth rate is higher than other two countries because they are able to improve quality of healthcare by having doctors for treatments. Since three countries have their own specialties on medical treatments so although the correlation between human resources delivery cannot be ignored, more evidences are needed to prove whether this correlation is significant or not

Graph.5

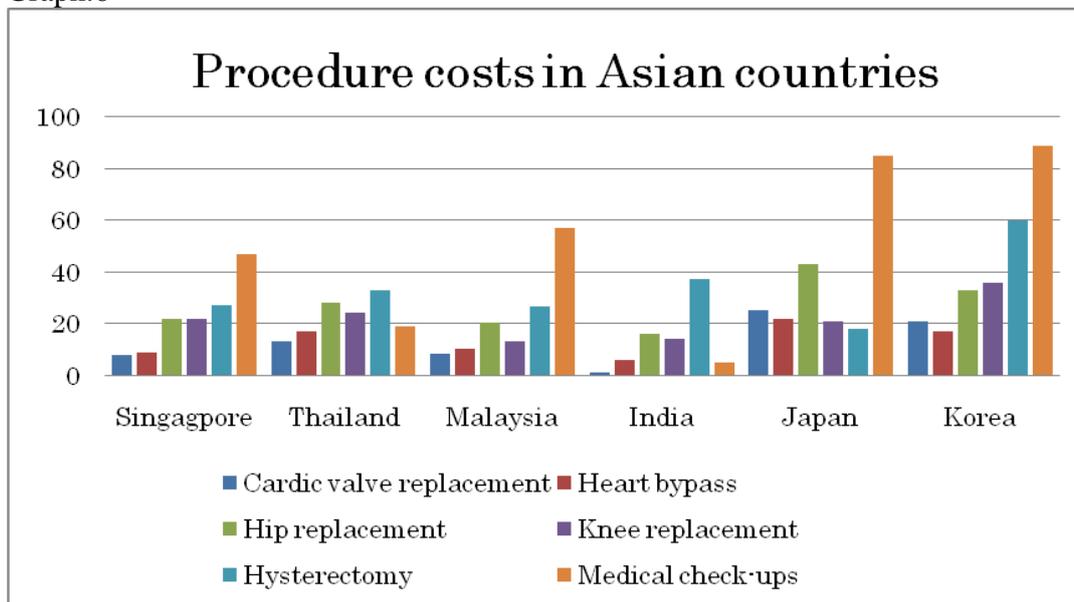


Source: Ministry of Health, Singapore, Thailand and Malaysia

Hospital medical treatment I: Cost of treatments

Healthcare cost is also a crucial indicator that affects decision-making on destination. Graph.6 shows six countries' major surgeon costs compared with America, where America represents a criterion of 100. As you can see, most of healthcare costs are approximately at the same level in Singapore, Thailand and Malaysia, where India is even cheaper than those three countries but Japan and Korea are somehow higher. However, these three countries' specialty varies to each other that Singapore is cardiac and neuro surgery, joint replacements and liver transplants, and Malaysia is cardiac and cosmetic surgery, Thailand is cosmetic and sex change surgery. There are also cases that foreigners receive treatments separately in several countries in the purpose of pursuing the lowest costs, for example, some Indonesians received medical check-up in Thailand where cost is the cheapest among three, and accepted cardiac valve replacement in Malaysia where surgeon cost is the lowest.

Graph.6



Source: Health Tourism.com

In conclusion, compared the main medical treatments costs in those countries, such significant cost differences are not founded, however, the subtle cost differences exist in three countries so that it can be assumed that patients movements happen in these three countries.

Hospital medical treatment2: Level of medical treatment services

Most of private hospitals provide not only medical treatment services but also services of basic necessities such as accommodations and meals for medical tourists.

Singapore

The level of healthcare treatments in Singapore is generally high, that most of doctors are well-trained abroad in the Western countries and well-experienced in the leading medical institutions, for the reason that they are ought to find jobs abroad since Singapore's demand is too small.

Also, in many private hospitals, service departments for foreign patients are established to support medical tourists' tours as arrangements of transportation and hotel reservation in advanced, design for souvenirs and tour plans. These related services in hospital are positioned as a business for profits so that marketing and distribution of products has been developed. As for accommodation, private hospitals tie up business with hotels around, for example, at the case of Mount Elizabeth Hospital, it cooperates with Elizabeth hotel and York hotel which are located nearby. Further to

improve attractiveness, corporate rate are applied for pricing when lodging in.

Also hospital services are considerate. Such like, meals can be ordered in details like Japanese food, Chinese food or Western food. From the point view of acculturation, halal food and vegetarian food, and Leanne Furute food are also provided

Others, packaging for payment and medical services are improving at the same time. For instance, in Gleneagles Hospital, it is able to obtain discounts at some degree by payment with American Express card.

Thailand

Although the quality of physician procedures is not as high as Singapore, it is considered comparable to Japan. With the same background of Singapore, it is commonplace that young doctors proactively go studying abroad and experiencing at leading medical institutions in Western countries.

Especially in Thailand, a strong sense of pride for homecoming is widely accepted, thus returning to homeland and working as a doctor is always the case for young doctors in Thailand, which is said to have contributed to the improvements of country's healthcare. Each private hospitals also is aware of its' own strengths and makes efforts to strengthen it in order to attract foreign patients. The oldest private hospital in Bangkok - Bangkok Nursing Home, which is strong in the spine and fertility treatments, received patients for infertility and spinal-related treatments which they cannot receive in their homeland like Japan, etc. More, hospitals that value medical tourism businesses have actively introduced advanced medical equipments which are as new as in Japan or even newer than in Japan.

As for hospital services, Thailand also has a strong tendency to focus on hospitality, while in terms of equipment, it seems more gorgeous than Singapore. Such trend is not limited for shops. For example, the Samitiveto hospital offers entertainments like live concert for piano and string quartet. Outside placement services for accommodations, joint businesses with hotel also developed as in Singapore. Some of these services are sold as packages products of services. For example, the

package of delivery services will have a basic cost of 50,000 baht (about 13.5 million yen) for natural childbirth, and plus either a platinum 4-day course, or a three-day gold courses. In addition, discount system for extending use of hospitals is set up and available.

Malaysia

Malaysian hospitals are among the best in the region and most private hospitals have internationally recognized quality standards, which include MS ISO9002. The majority of doctors in Malaysia have received post-graduate training in Western countries and offer top-tier medical care in state-of-the-art, internationally accredited facilities. However, Malaysia has a national accreditation healthcare scheme (MSQH) and many Malaysia's hospitals are currently firmly on the way to achieve international healthcare accreditation. Malaysian hospitals such Gleneagles Hospital Kuala Lumpur, International Specialist Eye Centre, Penang Adventist Hospital are JCI accredited . Same as in Singapore and Thailand, most private hospitals in Malaysia provide accommodation facilities to patients. Given Malaysia's low cost of living, the accommodation does not cost a lot to the medical tourists. Many hospitals in Malaysia have set up international departments to cater especially to the international patients.

Hospital medical treatment3: Language services

Singapore

Specific windows in several languages are set up for foreign patients when first screening the symptoms. However, a language window is established only when a large number of foreign patients use this language, if patients received in hospitals are only small amount, they are ought to correspond in English. In fact, for example, Mount Elizabeth Hospital set up the window for Japanese for several years but abolished it recently.

After simple medical check-up in the windows for foreign patients, if further professional medical treatments are necessarily needed, the patients will be introduced to specialists who essentially speak English. A specific case is that in Gleneagles Medical Center Hospital, nurses and doctors are

available in Japanese. Nurses who mostly come from Philippine and Myanmar are well-trained in their homelands thus also can speak English.

What is more, in Singapore, English, standard Chinese (Mandarin), Malay and Tamil are official languages and this country itself is multicultural, thus, it supports multiculturalism with no doubts.

Thailand

In Thailand, hospitals have their own training system for their health workers, such as they provide orientations for hospital staff. For example, the Bumrungrad Hospital has training programs about medical terminology in Thai and English each year, in addition, it offers bonus dependent on the attendances of classes and TOEFL scores.

Although, hospitals support foreign patients in those ways, but voices like ‘However interpreter is well, we still fear that whether subtle expressions about symptoms are correctly understood’ are heard from medical tourists.

As same as the case in Singapore, hospitals expand windows for countries which patients’ visits grow up into a large amount, while shut down windows which their patients’ visits decline. It is just the case in the Bangkok International Hospital that it makes decisions on whether abolish or not by ranking of sales by nation. Until year before last, Japan was in second place behind the UAE, while it was overtaken by Qatar in last summer, then been also removed afterwards by Myanmar. It has now dropped to the fourth, considering the future depression, the possibility of closing the window cannot be ignored.

Cultural support and medical care during hospitalization are also generous as well as language support. For example, in the Bumrungrad hospital, for one Japanese patients, one manager, one for outpatient support, and one for Japanese, and one for hospital support and one for language support on specific situation are organized as a team for customer service support. What is more, take the race problem into consideration, the hospitals separate races to several different wards.

Malaysia

Although Malay is the national language, English is widely spoken in both tourist and business

environments throughout Malaysia. Same as in Thailand, Malaysia's hospitals are generally available in English and in some hospitals it also provides support services for other languages.

Mr. Ienien said that "Hospitals like Penang and Malacca, Kuala Lumpur, are facilitated with health professionals, staffs based on international standards." For example, some hospitals have doctors who are available in Japanese and its staff is obliged to take training programs.

Especially, Indonesian patients are the main tourists in Malaysia for reasons that they have similarities in language, culture and diet with Malaysia. Malaysia's multicultural populace provides a distinct advantage in this area, with doctors and healthcare personnel who speak in English, Malay and Chinese.

Accessibility: Democracy

From World Resource Institute's data of earth trends, Malaysia has graded 9 in democracy, while Thailand has graded 3, and Singapore has graded -2. Those great differences in democracy do not seem to effect on medical tourists' decision-making for a reason that they are generally focus on the quality of treatment not on policies. However, Malaysia has an advantage on access to Islam countries markets. It targets wealthy people in those Middle-east countries such as Oman, Qatar, United Arab Emirates (UAE), by opening MSCI's offices in Dubai. The wealthy class in these countries faces difficulties in receiving health services in the West as it has received before for the reason of terrorism concerns in the West. Thus Malaysia took this as an opportunity and sells its healthcare services to these countries. In particular, UAE' government paid for the costs of treatments its citizens received in foreign countries by a budget of 260 million dollars per year. Malaysia has signed up partnership with Abu Dhabi Health Authority and Dubai Health Authority in order to meet its target- to hold 10% of the UAE's healthcare market. From this point of view, the nature of the nation has some influence on tourists' decision-making on destinations.

Conclusion

From the analysis above, several conclusions about indicators that effect medical tourism can be guided.

First, considering policy implications, it is obviously that either country has rapid growth in visits medical tourists from year 2002 to 2008 under the governments' promotion policy. Government policy is an important indicator to medical tourism, so that a cut-off of budget also affects medical tourism industry negatively; a new visa for medical tourists will stimulate visits of foreign patients.

Second, those efforts made by supply side-hospitals also influence decisions of the medical tourists' on destination countries. The most important indicators and attractiveness of medical tourism in Southeast Asia is cost advantage, while, Malaysia provides the cheapest treatments among the three, but the cost differences are subtle and each country has its own specific procedure field so that patients' decisions are not only related with cost but also with the services that hospital sides provide, including services of language support, accommodation, tourism and package of paying and discount systems and after-follow system.

In comparing with those data and resources of factors descriptions, it is clear that at the part of policy implication, Malaysia and Thailand are tend to put medical tourism as a solution of domestic demand insufficiency so that they put great efforts on increasing visits of medical tourists by cut down costs and access-convenience, while Singapore put more attention on the quality of healthcare

However, in the part of hospitals' efforts, it can be seen that Singapore provides best language support because it has several official languages including English so that patients do not have to worry about communication problems and that is quite a serious influential indicator upon decision-making.

Thus, although Malaysia's medical tourism industry grows apparently faster than other two, so far neither specific policy implications nor special hospital managements are observed. For some parts, it has advantage compared with Singapore, in some parts it has advantage compared with Thailand. From my point of view, the reason why Malaysia developed the best is related with its

strategy to develop healthcare specifics close to Singapore and providing them in a lower price compared with Singapore so that the country can avoid competition with Thailand which has the same attractiveness- low cost. Also, considering the recession in developed countries, it is expected that demand for sexual change surgeon and cosmetic surgeon will fall down, so that Malaysia's strategy to develop specific field like cardiac surgeon will be a wise choice.

In this process, GATS can be considered as a positive indicator for reasons that first it increases foreign patients for a effect of trade liberalization on the field of healthcare, second, it strengthens the roles for foreign capitals and completes a system in destination countries that can avoid monopolizations of foreign investors which make the market transparent and ordered. As we know, in Southeast Asia, many countries' government and private capital has invested on the field of medical tourism, however, the foreign investor received tax exemptions and deregulations in destination countries which hinder the growth of host countries medical tourism industry. So that after scheduling GATS could prepare a fairer environment for host suppliers thus more effort is contributed by host hospitals and the effect of policy implication becomes clearer.

Discussion and directions for future research

This research paper analyses the relationship between medical tourism and GATS commitments from the view of supply sides, especially about destination countries' framework of medical tourism and government policies on this field. However, in practice, market size is determined by equilibrium of supply and demand, so that analysis about the movements of equilibrium is vital and necessary. Thus, data about visits from which country to which country in detail is needed for a further study on this topic while using statistical models. Such data are not collected yet, since a standard criterion for statistics about visits of medical tourists has not been formatted. Considering the potential development on medical tourism globally, more researches and more concerns are expected. Perhaps, after a couple of years, data will be available.

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