

International trade in health services in the millennium: the case of Thailand

Wattana S. Janjaroen¹ and Siripen Supakankunti²

INTRODUCTION

International trade is built around international specialization and based upon comparative advantage. It is usually described by terms such as *liberalization* and *globalization*. Free trade has long been endorsed by the existence of the General Agreement on Tariffs and Trade (GATT). The GATT has been used as an international instrument whose objectives are to promote and regulate the liberalization of international trade through “rounds” of trade negotiations. Multilateral trade negotiations held under GATT led to the establishment of an international organization known as the World Trade Organization (WTO) which has international legal status and regulates all matters related to international trade among Members. This organization provides the principal governmental contractual obligations prescribing how governments should frame and implement their trade policies.

The principal WTO instrument consists of multilateral agreements that are binding upon Member countries. It includes 29 legal agreements which cover everything from agriculture to textiles and clothing, and from services to government procurement, rules of origin, and intellectual properties.

Presently, free trade or trade liberalization is one of the favorite topics of discussion among political leaders around the world. Many people almost automatically think that free trade is a good thing for all countries to practice. The logic of comparative advantage is, for the most part, not contested, yet it opens up borders to the easy flow of imports, which can create problems for countries unless they can raise exports to the same rate as that of imports or higher. The rich and strong (developed) countries with big companies usually take advantage of trade liberalization, while the poor and weaker (developing) countries

¹ Associate Professor of Economics, Faculty of Economics, and Associate Dean, College of Public Health, Chulalongkorn University, Phyathai Street, Bangkok 10330, Thailand.

² Assistant Professor, Director, Center for Health Economics, Faculty of Economics, Chulalongkorn University.

most often end up losing. Sub-Saharan Africa, the world's poorest region, suffered a total of US\$ 5.9 billion in income losses during 1987-1989. Trade liberalization increases competition which, in turn, reduces costs. Some countries may end up importing cheaper products including capital and produce nothing. It is not true that "free trade" has been a great benefit to all countries.³

However, the agreements from the Uruguay Round of multilateral trade negotiations are not all for "free trade." The strong countries succeeded in making a restrictive, conditioned agreement on intellectual property rights, known as Trade-Related Aspects of Intellectual Property Rights (TRIPS). These results will hinder the growth of technological capacity in developing countries and enable the strong countries to secure a monopoly on the power and benefits derived from intellectual property rights. The drug industry is an example. Annex A shows that Thailand has less revealed comparative advantage than Germany, Switzerland, and Singapore.

International trade in services is a rapidly growing area within the global economy, accounting for an increasing share of products in both developed and developing countries. Therefore, trade in services was the main focus of the multilateral trade negotiations during the Uruguay Round negotiations. The General Agreement on Trade in Services (GATS) was one

of the major results of those negotiations.⁴ International trade in services covers transportation, telecommunications, insurance, travel and tourism, and legal, education, and health care services. Initially, 13 countries, mostly developing countries, were reluctant to include trade in services in the Uruguay Round negotiations, because international trade in services is significantly different from that in goods (Table 1).

As a Member of WTO, Thailand also participated in the multilateral trade negotiations. It made some specific commitments on service liberalization with exception of the health care sector (see Table 1). However, it plans to make commitments consistent with GATS in the years to come.⁵

Although there have been improvements in health status, health coverage, and access to health care throughout the world, those improvements may not benefit all. The consequences of trade liberalization could possibly create more disparities between developing and developed countries. In the case of Thailand, studies have shown that the structural changes of output resulting from trade in services liberalization are negative, even though some service sectors have positive annual output growth. Therefore, this paper will attempt to explore what will happen if Thailand commits to free trade in health care services.⁶ It will describe health services in Thailand and under GATS.

³ The economic crisis in many countries, including Thailand, is partly the product of free trade.

⁴ The multilateral agreements on trade in goods include the Agreement on the Application of Sanitary and Phytosanitary Measures, Agreements on Technical Barriers to Trade, General Agreement on Trade in Services (GATS), and the Agreement on Trade-Related Aspects of Intellectual Property Rights.

⁵ At present, only 32 out of 134 WTO Members have negotiated and made specific commitments in health sector services.

⁶ The 180 sectors of Thai companies are grouped into 38 industrial sectors and can be categorized into four types of productivity (Annex B). Medical and health care services are considered as the final primary products that require inputs from other industrial sectors.

Table 1. Summary of industry-specific commitments scheduled by Asia/Pacific trading partners, by industry, under GATS

	Australia	Hong Kong	India	Indonesia	Korea	Malaysia	New Zealand	Philippines	Singapore	Thailand
Distribution	X	X			X		X			X
Education	X						X			X
Enhanced telecommunications	X	X	X	X	X	X	X	X	X	X
Audiovisual		X	X		X	X	X		X	X
Courier		X						X	X	
Health care	X		X			X	X		X	
Accounting and finance	X	X			X	X	X		X	X
Advertising	X	X			X	X	X		X	X
Legal	X					X	X			X
Architectural and engineering	X		X	X	X	X	X		X	X
Construction	X	X	X	X	X	X	X		X	X
Transportation	X				X		X	X		X
Travel and tourism	X	X	X	X	X	X	X	X	X	X

Source: U. S. International Trade Commission. General Agreement on Trade in Services: examination of the schedules of commitments submitted by Asia/Pacific trading partners. Publication 3053, August 1997.

Possible effects of having to agree to trade in health services are outlined as well as potential obstacles to that situation. Finally, the conclusions, recommendations, and roles of WHO, WTO, and other international organizations are presented.

HEALTH SERVICES IN THAILAND

Thailand is a developing country with a market-oriented health care system. Any patient has free choice in selecting a health care facility. Although public providers play a major role in delivering health care services, the private sector is growing in importance. Table 2 shows some important socioeconomic indexes comparing some countries in

Asia (Sri Lanka, India, and Bangladesh) to developed countries (United States and Japan). The GNP per capita of Thailand is far behind those of the USA and Japan but higher than those of Sri Lanka, India, and Bangladesh. The health status of Thais is worse than that of Sri Lankans but better than that of Indians and people in Bangladesh. The public health expenditures of Thailand and Sri Lanka were equal to 1.4% of the GDP during 1990-1995. With economic development and changes in epidemiological patterns occurring in Thailand (where heart disease, accidents, and AIDS contributed to 39% of total deaths for people under 50 years of age in 1997), health

Table 2. Selected health and socioeconomic indicators, 1997

	Thailand	Sri Lanka	India	Bangladesh	USA	Japan
Population (millions)	61	18	961	124	268	126
GNP per capita in US\$	2,800	800	390	270	28,740	37,850
Infant mortality rate (per 1000)	30	15	73	80	7	4
Deaths under age 50 as % of total	39	24	48	60	11	6
Life expectancy at birth (years)	69	73	62	58	77	80
Adult literacy rate, % (1995)	93.8	90.2	52	38.1
Public expenditure on health % of GDP 1990-1995	1.4	1.4	0.7	1.2	6.6	5.7

Source: World Development Report 1998-1999 and the World Health Report 1998.

prevention and health promotion are becoming increasingly important.

WHAT ARE HEALTH SERVICES UNDER GATS?

International trade in services is a rapidly growing activity of world economy that opens up new possibilities in the health sector. Health service policy has established relationships between social and commercial elements in addition to creating scientific, professional, efficiency, and ethical considerations. Trade in services should be guided strongly by the objective of improving the health status and living conditions of the population, especially in developing countries.

Many governments find that providing health services to their populations is a very complex matter. In industrial countries, rising health care costs combined with an

increasingly aging population, have reduced public spending on social programs. Health services trade offers countries the opportunity to enhance their health systems through trading health technology in areas where countries have comparative advantages. Developing countries might improve their infrastructure, upgrade medical knowledge and technological capacity to satisfy foreign demand, while increasing that demand and earning more in foreign currency.

A number of questions remain, and there are no clear answers. Government health authorities have to do many things to improve national health services and benefit local populations. Various health service sectors depend on many factors, such as cost structure, the quality of health personnel, facilities and infrastructure, natural endowments, and cultural and geographical considerations. The question is how to best meet the objectives of profitability and resources

to generate improvements in the population's health, which is the goal of every health system.

The goals of public health identified by the WHO are *equity in access to care*, *efficient use of resources*, and *quality of care*. This section will attempt to assess the possibility of a free trade consistent with these public health objectives and the consequences of free trade in health services. The opportunities and consequences of international trade in health services can be discussed in the context of the four modes of supply defined in the GATS Agreement.

Cross-border trade

In recent years, the rapid growth of telecommunications and information technology has expanded tremendously the potential for providing health services across national borders. Such trade can be practiced in the form of telemedicine, using interactive audiovisual and data communications, which includes care delivery, diagnosis and treatment, and medical education. This method can be substituted for direct contact between health care providers and patients or direct consultation among providers. Commercial telemedicine services exist both in developed and developing countries. Telemedicine services exist between the Arab Gulf Countries and the United States and telemedicine links between University Hospitals in Norway and hospitals in Russia. France, the United Kingdom, and Australia also provide services by using

telemedicine and tele-education.⁷ China has experience providing tediagnosis services to patients in Taiwan, Macao, and other areas of Southeast Asia.

Telemedicine and information technology develop quickly in rich countries, but the developing or poor countries have the greatest need of this technology to bridge the gaps that cannot be met by conventional means of delivering services. However, it is not easy to judge whether increased use of telemedicine in developing countries would lead to more *equity* in accessing health services. If the cost of telemedicine is covered by the public sector through taxation (normally, indirect taxation), it might not be considered *vertical equity*.⁸ Further consideration about realizing equitable access⁹ to services concerns the mobility of health professionals. Availability of human resources in the health system might move toward telemedicine if the opportunities of earning higher wages, upgrading skills or improving career prospects are better than in conventional medical services. This will reduce equity overall if it is not utilized in the appropriate area. In fact, clear government policies on the place of telemedicine in the health care system are needed; remote areas and underserved populations without access to services are a significant consideration for an equitable system.

The use of telemedicine obviously improves the *quality* of the health system, by providing timely and

⁷ G-7 Information Society. G-7 Pilot Project Report, 1997.

⁸ Indirect taxation is regressive, therefore the poor might end up paying more than their economic capacity warrants.

⁹ Equitable access can be generalized as "equal utilization of health services for the same need."

effective health interventions and improving the training of health providers.¹⁰ A general practitioner could seek the advice or opinion of an expert located anywhere in the world while attending a patient. Telemedicine can provide the rapid and reliable diagnosis that local facilities might not have the skill or equipment to supply.

Nevertheless, if the cost of telemedicine is carefully evaluated, its *efficiency* appears to be debatable. The cost of telemedicine services not only includes the communications infrastructure, equipment and operations, but also training of skilled personnel to run the communications system. The sources of funding in this area come from both public and private sectors; but capital investment, solely from private funding, is very rare. Telemedicine services often receive government subsidies through tax exemptions on technological equipment. Therefore, the use of public funds for telemedicine raises the question of cost-effectiveness. Investment in less sophisticated (conventional) types of care may be more efficient in terms of reduced morbidity and mortality and, as a result, more cost-effective.

Health care consumption abroad

At present, patients might go to other countries to seek health care for various reasons. Patients with a high ability to pay might wish to take advantage of advanced, specialized treatments unavailable at home or avoid long waiting lists in their home countries.

Some developing countries might try to attract foreign patients in order

to increase foreign exchange earnings, provide employment for health care personnel, and obtain related career and financial benefits from economies of scale that would help to upgrade their health service sector as a whole. For example, India can offer “super-specialties” such as cardiovascular surgery and certain exclusive, alternative medicine therapies with highly qualified medical personnel and a well-developed pharmaceutical sector. India’s advantage is in its competitive prices, which are estimated to be around one fifth to one tenth those of industrial countries for the same intervention or treatment.

In view of rising health care costs in developed countries along with an increasingly aging population, some developing countries can offer special health packages to retired persons from developed countries during temporary stays in their countries. Both sides benefit: the developed country from better containment of the cost of health services and the host country from increased revenues.

Commercial presence

The domestic health sector may open its health services to the foreign market to provide health-related services to clients from other countries. This can result in investment in the hospital’s operations or management or in health insurance. Most health services providers will not invest in developing countries where only a few people can afford private treatment. In common practice, most providers of health services invest in foreign countries through joint ventures with local partners to ensure access to qualified, trained local medical health personnel,

¹⁰ Details in: Health information and telemedicine. Unpublished document EB99/INF.DOC./9, WHO, Geneva.

and a better understanding of local culture and characteristics.

“Managed care services” is another technique for penetrating foreign markets. It integrates financing and delivery of medical care through contracts with physicians and hospitals and links with insurance companies.

Foreign commercial concerns in the health sector, in the form of investments in hospitals or health insurance schemes, might improve health services delivery. In most developing countries, the only portion of the population that benefits is the small group with high ability to pay. If the government were able to watch closely and regulate the health sector, including private providers, there might be benefits for the general public. That is, the poor might benefit from better access to health care if resources were reallocated within the public sector as the result of greater use of the private sector by those who can afford to pay.

The presence of foreign commercial firms (with large amounts of capital) means a greater need for highly qualified health personnel, and this might cause an internal brain drain from the public to the private sectors. Countries facing real shortages of skilled health personnel would end up with fewer skilled physicians and nurses working in the public sector to serve the majority of the population. The health system would become more two-tiered, with different standards for different population groups. Therefore, an increased foreign presence in health services management may decrease *equity* in access to health services.

On the other hand, an increased foreign commercial presence in

hospital and health management might improve *quality* through introduction of better management techniques and information systems. However, driven by the perception of better quality, the government might allocate more resources to high technology services rather than fulfilling broader social demands and this, in turn, would make it difficult to maintain good quality public services.

The impact of a foreign commercial presence on the country’s efficient use of health sector resources may vary. Foreign investment in health care—for instance, in hospitals—is likely to increase the overall level of funding in the sector, enabling the government to reallocate public funds in a more *efficient* and equitable manner.

A foreign commercial presence should also increase competition in the delivery and financing of health services. Market failures in the health sector mean greater competition among providers but do not guarantee improved efficiency. That is, the volume of health services may increase because of supplier-induced demand, which might contribute to cost escalation.

From the public health point of view, (equity, quality and efficiency), if governments allow foreign commercial concerns and strong competition, they need to provide a strong, effective regulatory framework and appropriate incentives for the private sector, including foreign firms. It is essential that governments first clearly put forward the national policies on health and health care financing, and only then determine the scope for an expansion of foreign presence within their countries.

Temporary presence of natural persons as service suppliers

This area of international service trade is becoming increasingly important to the countries in Southeast Asia and developing countries, given that the health services sector is labor-intensive, largely based on universal scientific knowledge, and there are shortages of health personnel in many countries. Many qualified health professionals migrate to seek better living standards, career opportunities, and higher remuneration which they cannot get in their home countries. Hence, the migration of health personnel could alleviate the shortage in the more developed countries.

Many countries have experienced both an inflow and an outflow of health personnel. Physicians and nurses from the Philippines and Thailand migrate to the United States to work and live better, and this creates a short supply of physicians and nurses in their home countries. In other words, this causes “brain drain” problems. Although we have free trade in health services, migration of health personnel to other countries can be impeded by professional licensing requirements. In many countries, including Thailand, physicians and nurses cannot practice without licenses and visas for entering the country.

It is evident that the migration of health personnel will have an impact on *equity* if it creates shortages in the home country and reduces access to services formerly provided by the migrants. If there is an excessive supply of health personnel, their migration may increase *efficiency* more than equity.

Temporary migration of health personnel could improve the *quality* of care if they returned to resume their

practice in their home countries. However, the quality of care may suffer if the home country loses the best health personnel. The migration of health personnel creates higher costs for the home countries, since in most of them education of health personnel is mainly subsidized by public funds and requires a large investment. Thus, the original countries subsidize the other countries without compensation. This entails an additional cost for society and is, therefore, less *efficient*. However, costs may be partially offset by the remittances that migrants send home.

One can see that trade liberalization in health services causes both positive and negative impacts on health systems. There is increasing interest in the possibility that trade in health services might increase foreign exchange earnings. Each government has to make careful choices to reconcile commercial considerations with social priorities to ensure the population’s equity in accessing good quality and efficient services.

THAILAND AND POTENTIAL GATS COMMITMENTS IN HEALTH SERVICES

In Thailand, as in many rapidly developing countries, the service sector is the largest and fastest growing sector of the economy, and very important in supporting manufacturing growth, output, and employment. It averaged around 57% to 59 % of the GDP per year from 1980 to 1994. Up to the present, Thailand has made commitments on international trade in only eleven service sectors such as telecommunications, construction, financial services, transportation, and education (see Table 1), but not in health services.

Health services activities are delivered through public and private providers. The major purpose, and expected outcome, of an efficient health system is to improve the health of the population by ensuring equity in accessing adequate health care. At present, with the economic crisis, the Thai government is faced with a complex set of factors and has to assess how changes in economic conventions can be managed in order to improve health services and benefit the population.

Trade liberalization in health services offers countries opportunities to enhance their health systems through the generation of additional financial resources, to improve infrastructure by using resources resulting from satisfying foreign demand and migration of qualified health personnel, and to upgrade medical knowledge and technology capacities. The competitive position of health services among local public and private providers and other countries will mainly depend on various factors: cost structure, the quality of health facilities and infrastructure, the availability of skilled human resources, the natural endowment, and cultural and geographical specifics. Developing countries like Thailand have potential in terms of trade in the health sector.

The Thai have access to two main types of health care: modern medicine and traditional medicine, even though the role of traditional medicine is declining. Thailand has a market-oriented health care system. Although public providers play the major role in providing health care services, the number of private hospitals and clinics continues increasing, from 11,495 in 1989 to 11,988 in 1994 (National Statistical Office). The government provides equal opportunities for both

private and public facilities according to market competition. However, the health-care resource distribution is unequal, with a concentration of private health care facilities in Bangkok and the big provinces. Health personnel is scarce and poorly distributed countrywide. The growth of the private health sector has adversely affected the government sector because of the flow of public health personnel to the private sector during the past five years. Health care financing schemes in Thailand cover about 70% of the total population. The strength of the Thai health system resides in its diversity. The consumer is free to choose modern or traditional medicine, and public, private, or self-care.

The following section will explore the present situation in Thailand along with the four modes of supply under GATS, the health services area in which the Thai have comparative advantages, and the potential impact of the WTO agreements on the Thai health system.

Cross-border trade

Telemedicine has been practiced in Thailand for the last 10 years with demonstrations and support from the United States and Canada. There are 17 national telemedicine units, aimed at providing health care consultation in remote areas as well as continuing education for physicians. The telemedicine project has a network of 3 teaching public hospitals, 14 regional hospitals, 7 provincial hospitals, and 20 community hospitals. They communicate through an integrated digital network system but the system does not function properly and is used mostly for broadcast rather than for two-way communication. In early 1998, a hospital in the United States

demonstrated heart surgery via satellite to a private hospital in Bangkok; physicians in both countries observed the process at the same time. At present, telemedicine is not used yet for providing health care services in Thailand, because this system requires a big investment in hardware. The opportunity to trade this service with other countries is minimal.

Studies show that telecommunications offer a significant opportunity to face and alleviate the health problems within and between countries and to spread awareness and understanding of the global interdependence in health and environmental issues. Telecommunication tools and services could be used to improve the equity of access to quality health care, the extent and quality of education and training of human resources, the cost-effective surveillance of diseases, and services and technological developments for affordable diagnosis and treatment in poor countries.

To date, Thailand has no specific plan for cross-border trade in telemedicine. Should Thailand need or want to progress in this area, there are three issues to be considered and discussed carefully before a plan is formally adopted:

1. The conventional health practice is a face-to-face encounter between healer and patient, which has laws and regulations intended to safeguard the interests and concerns of the health care consumers, and at the same time to protect the profession and individual practitioners. In telemedicine, questions on some ethical and legal aspects remain. For example, in real practice, what would be the responsibilities of the managers, users, and intended

beneficiaries and, in particular, of the provider and recipient of telemedicine services?

2. There are licensure problems for cross-border medical practice. In Thailand, in compliance with the Act on Medical Care Institutions B.E.2504, information on the professional qualifications of health personnel must be provided before setting up a new hospital or clinic. This might impede the growth of telemedicine between Thailand and other countries.
3. Telemedicine services between one-to-many or many-to-many sites often require a “gatekeeper” to direct and monitor or control the link involved and to ensure a proper response to each service request within a preset time. The gatekeeper function is considered a commercial transaction, which directly affects cross-border telemedicine trade in Thailand, because of the laws and regulations governing work permits, foreign investment, and other commercial transactions.

Health care consumption abroad

Even though Thailand has not made any commitments on the trade in health services, people from neighboring countries arrange inpatient visits. Wealthy people and foreigners who work in international organizations visit private and public teaching hospitals, while the poor from neighboring countries migrate into the country for health services in provincial hospitals along the border.

After the 1997 economic crisis, the civil government health-benefit scheme was reformed. Government officials

Table 3. Number of high-technology interventions used per year in a sample of Thai private hospitals, 1993-1997

Year	CT-scan	MRI ^a	Mammogram ^a	Gamma knife
1993	226 ^a
1994	854 ^a	12
1995	1028 ^a	326	8	...
1996	3674 ^b	420	208	...
1997	2024 ^c	323	209	250 ^d

^a 3 hospitals; ^b 1 hospital; ^c 2 hospitals; ^d data from 1996 to March 1997, from 1 hospital.

can no longer get health care services from private hospitals. Now, if a government official wants private services, he needs to pay for them himself, so he is less likely to avail himself of those services. This is a loss for private hospitals, most of which, especially in Bangkok, are capital-intensive investments with high-quality health personnel and high-technology medical equipment.¹¹ Most of them are underutilized now.¹² Yet, most of the large private hospitals are capable and willing to provide health services for consumers from abroad (Table 3). The most common areas of health care service requested by foreigners are acute care, physical checkups, dentistry, long-term care, and health promotion. These are very promising areas for foreign exchange earnings if Thailand makes the commitment to international trade in health services.¹³

In addition, 5 million people who came to Thailand as tourists and businessmen in 1997 got sick during

their journey and had to receive health care services. Some private hospitals also provide dental care and cosmetic surgery to foreign customers, most of whom say that the services received cost less and have equal or better quality than those provided in their own countries.

The potential to combine health services with tourism is good. A health service package, i.e. a health checkup, can be sold with a tour package. Long-term stays (1-3 months) in Thailand with health benefit programs are popular among the elderly population of visitors from Europe and Japan. The disposable income of these people is estimated to range from US\$ 12,000 to \$20,000 per annum with an additional \$5,000 per annum available in health care benefits. If health insurance benefits were portable, this advantage would be further enhanced.¹⁴

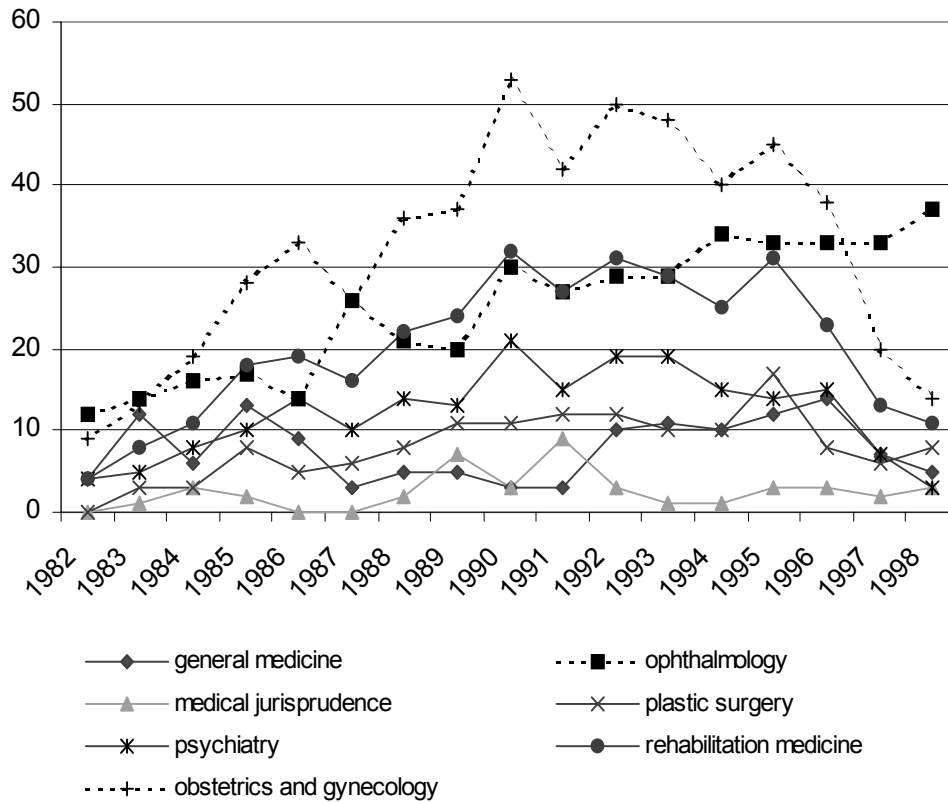
International trade holds various advantages for Thailand. The availability of a diversity of specialists

¹¹ The private health sector in Bangkok has more gamma knife, CT-scan imaging, and mammogram capacity than England.

¹² Private hospitals that own gamma knife equipment stated that the utilization rate of this equipment is only 50%.

¹³ Janjaroen WS, et al. "Preliminary study on trade liberalization in the health services sector: its consequences on social and health care system in Thailand." Research report submitted to the Thai Research Fund, Bangkok, Thailand, October 1999.

¹⁴ *Ibid.*, p.12.

Figure 1. Newly-licensed Thai physicians by specialty, per year, 1982-1998

Source: Office of the Permanent Secretary, Ministry of Public Health.

is valuable for meeting the needs of patients. Figure 1 shows the numbers of newly-licensed physicians by specialty. The increase in plastic surgeons and ophthalmologists implies that Thailand has the capacity to offer services in those areas also. It could thus generate more foreign exchange earnings as well as more job opportunities in linkage industries such as tourism and the food industry, insurance, and hotel businesses.¹⁵

Despite the potential advantages of free trade, possible impacts on the health system have to be considered.

One is that the equity of local people in accessing health care services might be disturbed, since the number of health professionals is limited and unevenly distributed throughout the country. Therefore, the ratio of health personnel to population may worsen (Table 4).

Other effects could be the creation of a two-tier system with the better quality services reserved for foreign clients with a higher ability to pay, and the danger of importing infectious diseases such as HIV/AIDS.

¹⁵ The study mentioned in note 14 showed that the backward linkage multipliers on value added and employment of medical services sector were found to be above average (Annex C).

Table 4. Ratio of medical and health personnel to population, per year, Thailand, 1982-1996

Year	Physicians	Dentists	Pharmacists	Nurses	Technical nurses
1982	1 : 6,380	1 : 42,773	1 : 15,773	1 : 2,299	1 : 30,023
1983	1 : 6,230	1 : 39,479	1 : 16,465	1 : 2,089	1 : 17,100
1984	1 : 6,277	1 : 38,147	1 : 15,273	1 : 1,944	1 : 8,709
1985	1 : 5,988	1 : 35,697	1 : 15,343	1 : 1,849	1 : 4,857
1986	1 : 5,597	1 : 37,971	1 : 15,784	1 : 1,774	1 : 4,776
1987	1 : 5,624	1 : 36,699	1 : 14,874	1 : 1,752	1 : 3,771
1988	1 : 4,881	1 : 32,911	1 : 15,867	1 : 1,706	1 : 2,912
1989	1 : 4,396	1 : 26,525	1 : 14,612	1 : 1,490	1 : 2,782
1990	1 : 4,497	1 : 24,641	1 : 13,509	1 : 1,443	1 : 2,600
1991	1 : 4,449	1 : 23,655	1 : 13,146	1 : 1,400	1 : 2,446
1992	1 : 4,313	1 : 21,652	1 : 12,539	1 : 1,317	1 : 2,273
1993	1 : 4,279	1 : 20,939	1 : 12,357	1 : 1,250	1 : 2,160
1994	1 : 4,224	1 : 19,958	1 : 10,682	1 : 1,167	1 : 1,993
1995	1 : 4,209	1 : 20,438	1 : 10,172	1 : 1,100	1 : 1,908
1996	1 : 3,460	1 : 16,288	1 : 9,813	1 : 1,072	1 : 2,106

Commercial presence

In Thailand, foreigners are not permitted to own private hospitals or clinics, except as a joint venture with Thai partners. The Ministry of Trade requires that the maximum foreign share be limited to 49% of the total investment. Table 5 shows the investments in new hospitals every year from 1992 to 1998. Foreign direct investment in this sector is very small, equaling 0.26 % of the total number of shareholders and 0.57 % of the total value of investment.

The economic crisis has shown the importance of money from foreign investments. If this joint venture requirement is removed, there might be a monopoly in the private health care market. Therefore, the point that

creates a win-win situation for both foreign investors and home countries needs to be researched in detail.

Temporary presence of natural persons as service suppliers

The inflow of medical personnel from abroad will increase equity in accessing health care services as well as improve the quality of services for local people. However, language, culture, and occupational license requirements curtail this situation. Therefore, there is no official record of foreign health personnel practice in Thailand.

On the other hand, there might be a brain drain of health personnel from the public to the private sector and to hospitals abroad.¹⁶ Table 6 shows the

¹⁶ Health personnel moves from developing to developed countries in search of better living standards, higher income, and better technology and equipment in health care practice. Physicians and nurses from India, the Philippines, and Thailand migrate to the United States, England, and European countries. As a result, the ratios of doctors to population and nurses to population back home worsen. Therefore, the ability of local people to access health care services diminishes.

Table 5. New investment in private hospitals, Thailand, 1992-1998

Year	Nationality	Number of shareholders	Number of shares	Value of shares (in Baht ^a)
1992	Thai	5,404	838,867,430	3,153,091,300
	Foreign	11	400,870	4,008,700
1993	Thai	5,089	468,232,342	3,275,508,350
	Foreign	3	2,861,875	28,618,750
1994	Thai	6,028	571,979,584	4,512,594,500
	Foreign	3	37,400	3,740,000
1995	Thai	2,839	8,176,999	165,685,000
1996	Thai	408	6,518,000	41,948,600
	Foreign	1	39,200	9,800,000
1997	Thai	79	153,000	15,300,000
	Foreign	10	1,546,199	15,461,990
1998	Thai	97	862,060	33,842,300
	Foreign	2	19,993	1,999,300
Total		19,974	1,899,694,952	11,261,598,790
Total	Thai	19,944	1,894,789,415	11,197,970,050
	Foreign	30	4,905,537	63,628,740
Ratio	Thai	99.85%	99.74%	99.43%
	Foreign	0.15%	0.26%	0.57%

Source: Janjaroen WS, et al. Preliminary study on trade liberalization in the health services sector: its consequences on the social and health care system in Thailand, 1999.

^a US\$ = 40 Baht in October 1999.

number of registered physicians, which increased from 12,965 in 1985 to 23,744 in 1998. Notice that, even without any agreement on trade in health services, there is an outflow of medical personnel to points abroad every year. During that period, however, the outflow was not significant and averaged only 4%. Migration of medical personnel is not easy due to medical license requirements of the host countries.

Nevertheless, some types of medical facilities, such as fitness

centers, clinics, and health promotion centers can be run without professional supervision. Their licenses are granted directly and they are controlled by the local administration, the ministry of public health, or the ministry of trade. There are also some health and health-related services, such as those provided by Chinese healers and chiropractors, that are not under the control of professional councils or national committees. They might give poor-quality treatment to clients, which is not cost-effective.

Table 6. Registered physicians and number of them working outside the medical field, in and outside Thailand, 1985-1998

Year	Registered physicians	Physicians working outside the medical field
1985	12,965	453
1986	13,618	481
1987	14,359	503
1988	15,097	515
1989	15,886	533
1990	16,678	553
1991	17,535	584
1992	18,409	606
1993	19,295	616
1994	20,158	638
1995	21,047	669
1996	21,913	758
1997	22,803	810
1998	23,744	958

Source: Medical Registration Division, Office of the Permanent Secretary, Ministry of Public Health, Thailand.

POTENTIAL FOR AND BARRIERS TO TRADE IN HEALTH SERVICES

To date Thailand has not made any commitment on trade in health services. The contribution of international trade in health services to the GDP cannot be determined explicitly; it falls under the category of "services." According to the discussions previously presented, we can foresee both the potential for trade in health services in Thailand as summarized in Table 7, as well as the obstacles.

Telemedicine

In the short run, telemedicine services may not have much potential in international trade because of many obstacles. For one thing, such services need large investments in equipment plus qualified personnel to operate the

system. Yet, these services might increase the health-care accessibility of patients in remote areas and improve the quality of health personnel and health services by facilitating consultations with experts in more developed areas. However, this benefit may have to be traded off with cost-efficiency. Cross-border trade might not work in Thailand because most Thais like to meet their physician in person. Besides, it is not clear who would assume responsibility if there were something wrong with the services given.

Inflow of foreign patients

Inflows of foreigners seeking health services can come from both developed and developing countries. At the moment, there is no evidence to indicate that foreigners come to Thailand for the specific purpose of obtaining health care services. Case studies in the private sector show that only small numbers of patients from abroad are receiving health services. However, studies show that Thailand can potentially export some kinds of

Table 7. Potential areas for trade initiatives in Thailand

<i>Cross-border trade</i>	<i>Movement of consumers</i>
Telemedicine	Medical and dental services
Tele-education	Health promotion and tourism
	Traditional healers
	Nonemergency care
	- elective and chronic care
	- cosmetic
<i>Commercial presence</i>	<i>Migration of personnel</i>
Hospitals and clinics	Skilled health personnel
Health management services	Consultants

health services. These are dental services, health promotion, health checkups plus tourist-related care, traditional healing, and elective care. These service areas might be important sources of foreign earnings. In any event, patients who have to stay for long periods for treatment and services would find that obtaining a visa can be an obstacle. This problem can be minimized by making a special request for a longer stay. Still, with the free movement of consumers one may anticipate the crowding out of Thai citizens.

When Thailand faces a big economic crisis, the inflow of foreign capital is very necessary and important. Table 5 shows that in 1998 foreign investment in the health sector was minimal, since Thai law limits foreigners to no more than 49% ownership of the total shares. We should study in detail the consequences of relaxing this law as well as the possible problem of a two-tier system.

Migration of health personnel

There is no evidence of an inflow of foreign health personnel into Thailand, since there are licensing regulations for health professionals. In this manner, Thailand may be missing the opportunity to gain high-technology and other knowledge through personnel from developed countries. On the other hand, if free trade is allowed, the quality of services may diminish because of less qualified health personnel also moving in. There might also be a loss of public investment through remittances to the home countries.

CONCLUSIONS

The essence of the health service sector in the Thai economy is based on its role in generating foreign earnings, boosting macroeconomic prosperity, and enhancing the country's international competitiveness. The challenge for developing countries, including Thailand, in future negotiations is to obtain gains in those areas where they have a comparative export advantage.

This paper has indicated that there are many complexities in free trade in the health services sector. The specific commitment and market access commitments under the GATS allow WTO Member countries to restrict some health services from free trade in order to maintain the basic objectives of public health. Policy-makers need to compare the different options available in the context of national priorities.

RECOMMENDATIONS

For future negotiations, the Thai government has to increase its awareness of the following key aspects of health services trade at multilateral and other negotiating rounds and observe tradeoffs between the policy objectives for each particular mode of supply.

1. Promote awareness of the potential benefit and disadvantages of globalization, especially under GATS.
2. Establish an institutional body including government, private sector, nongovernmental organizations, and society representatives

to collect data and information and then study and analyze the positive and negative consequences of trade liberalization in health services. This body would act as the prime mover in creating a national mechanism, principles, and guidelines based on current knowledge to be discussed and balanced with the values of different stakeholders. These discussion results can be used for public empowerment and informed decision-making. Specific issues, which need prompt consideration, are as follows:

- Procedural solutions to consequential development of telemedicine and insurance services.
 - Easing some of the regulations and laws on the medical and health services industries to enhance health service values in a way that minimizes the impact on the health system, and establishing links between commercial concerns and movement of personnel (service providers), since these two modes of supply are interdependent.
 - Aspects of domestic regulation through licensing go beyond the specific commitments on trade in services. If the established national requirements cannot be met by foreign service suppliers, the Thai market will be closed to them. On the other hand, if the government wishes to import specialized medical services, it needs to recognize providers' qualifications. Therefore, the government
- needs to carefully develop comparable national regulations in order to facilitate the process of international recognition of national medical and health personnel qualifications and create the basis for future free trade.
- Impose a progressive taxation rate on foreign market systems and use it to create equity in accessing health care services for local people.
 - Encourage the participation of society in the decision-making processes related to trade liberalization and the use of health resources. This would help to assess the acceptability of new policies.
3. Strengthen the capacity of national institutes through training and research in international health as related to trade liberalization.
 4. Develop comprehensive plans with feasible benchmarks to prepare the country to effectively participate in trade liberalization based on a win-win situation. These benchmarks can serve as criteria for monitoring and evaluating the plans aimed at fulfillment of the GATS requirements by the year 2010.
 5. The Thai government should operationalize its commitment to trade liberalization by earmarking essential resources to support and maintain the optimal functioning of prime movers and national mechanisms.
 6. International organizations such as WHO, WTO, and UNCTAD should play a major role in helping underdeveloped countries to understand and analyze the impact of GATS and to negotiate

with other countries in the WTO meeting round. This can be done by organizing a meeting and bringing the countries to share their experiences, training the personnel involved in this work, and providing consultants to countries that need them.

BIBLIOGRAPHY

- Adams O, Kinnon C. A public health perspective. In: United Nations Conference on Trade and Development. *International trade in health services: a development perspective*. Geneva: UNCTAD; 1998.
- Bhagwati J. The case for free trade. *Scientific American* 1993;269(5):42-49.
- Chirathivat S. Thailand's trade in service liberalization: GATS-AFTA-APEC. *Asian Economics Studies* 1998; Volume 8.
- Daly HE. The perils of free trade. *Scientific American* 1993;269(5):50-57.
- Diaz D, Butkeviciene J. GATS commitments in the health service sector and the scope for future negotiation. In: United Nations Conference on Trade and Development. *International trade in health services: a development perspective*. Geneva: UNCTAD; 1998.
- Diaz D, Hurtado M. *International trade in health services: main issues and opportunities for the countries of Latin America and the Caribbean*. Washington, DC: Pan American Health Organization; 1994. (Technical Reports Series No. 33).
- Janjaroen WS, et al. Preliminary study on trade liberalization in the health services sector: its consequences on the social and health care systems in Thailand. Bangkok, Thailand, October 1999. (A research report submitted to the Thai Research Fund).
- Janjaroen WS, Supakankunti S. Health services systems and the consequences from the General Agreement on Trade in services (GATS). Paper presented at: Regional Consultation, WTO Multilateral Trade Agreements and their Implications on Health—TRIPS. Bangkok, Thailand, 16-18 August 1999. (Organized by SEARO, the Thailand Ministry of Public Health, and Chulalongkorn University).
- Khor M. Free trade—or who me?" *The Third World Economics Magazine*, Malaysia.
- Majia A, Pizurki H, Royston E. *Physician and nurse migration: analysis and policy implications*. Geneva: World Health Organization, 1979.
- Mandil SH. Telehealth: What is it? Will it propel cross border trade in health services? In: United Nations Conference on Trade and Development. *International trade in health services: a development perspective* Geneva: UNCTAD; 1998.
- Marconini M. Domestic capacity and international trade in health services: the main issues. In: United Nations Conference on Trade and Development. *International trade in health services: a development perspective*. Geneva: UNCTAD; 1998.
- The National Statistical Office, Bangkok, Thailand.
- Peterson S. Telemedicine in Norway, today and in the future. In: International Conference on the Medical Aspects of Telemedicine. Kobe, Japan, 1997.
- Prasad HAC. Healthcare exports under consumption abroad mode: opportunities, obstacles and challenges for developing countries in general and India in particular. New Delhi: Indian Institute of Foreign Trade; 1997. (Unpublished document).
- World Health Organization. International trade agreements and their implication on health. September, 1998. (Regional Committee document).

- Singkaew S, Chaichana S. The case of Thailand. In: United Nations Conference on Trade and Development. *International trade in health services: a development perspective*. Geneva: UNCTAD; 1998.
- U.S. International Trade Commission. General Agreement on Trade in Services: examination of the schedules of commitments submitted by Asia/Pacific trading partners. Washington DC: August 1997. (Investigation No. 332-374).
- Warner D. The globalization of medical care. In: United Nations Conference on Trade and Development. *International trade in health services: a development perspective*. Geneva: UNCTAD; 1998.
- Wolvaardt G. Opportunities and challenges for developing countries in health services sector. In: United Nations Conference on Trade and Development. *International trade in health services: a development perspective*. Geneva: UNCTAD; 1998.
- Xing H. The case of China. In: United Nations Conference on Trade and Development. *International trade in health services: a development perspective*. Geneva: UNCTAD; 1998.

Annex A. Revealed comparative advantage of medical and pharmaceutical products by country, 1984-1995

Year	Germany	Switzerland	United States	Thailand	Singapore	Malaysia
1984	1.648067	7.606859	1.657842	0.183912	0.662499	0.154684
1985	1.562768	7.08988	1.621384	0.173839	0.720859	0.138107
1986	1.40277	6.540413	1.558156	0.130688	0.62309	0.154433
1987	1.412753	6.789687	1.366131	0.127535	0.519315	0.143237
1988	1.356544	6.078945	1.226335	0.135049	0.415306	0.127221
1989	1.361008	6.36515	1.002356	0.101996	0.405206	0.12464
1990	1.338889	6.219965	0.967708	0.106750	0.361487	0.115394
1991	1.349896	6.258226	0.917512	0.103893	0.309335	0.105478
1992	1.273918	6.361359	0.894669	0.131270	0.286501	0.084794
1993	1.412419	6.329672	0.887864	0.241065	0.354233	0.076074
1994	1.43611	6.309272	0.847222	0.134984	0.358635	0.081203
1995	1.380216	6.426892	0.773525	0.153399	0.349767	0.074803

Annex B. Types of productive sectors

<i>Final manufacture</i>	<i>Intermediate manufacture</i>
Drugs and medicines	Paper, paper products, and printing
Medical equipment	Chemical industry
Milk and dairy products	
<i>Final primary production</i>	<i>Intermediate primary production</i>
Medical services	Banking, insurance services
	Sanitary and similar services

Annex C. Inter-industrial backward and forward linkage multipliers

Industrial sector	Backward	Forward	Backward linkage	Backward linkage
			multipliers on value added	multipliers on employment
Pharmaceutical sector	1.000964	0.724107	0.810235	0.717215
Medical equipment	0.924528	0.677482	0.774642	0.603248
Medical services	0.914213	0.644901	1.117509	1.342994
