

International Trade in Health Care Services: Prospects and Challenges for India

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Abstract

In the last two decades, international trade in health care services has expanded under the GATS. It has acquired new dimensions with the application of advanced information and communication technology and cross-border mobility. India is a participant in the GATS and has made binding commitments to minimise trade barriers. Under GATS, trade liberalisation is effected through four modes: mode 1 represents cross-border supply; mode 2, consumption abroad; mode 3, commercial presence; and mode 4, presence of natural persons. Though all modes are not totally free and are subject to restrictions, India enjoys certain distinct advantages, especially under modes 2 and 4. India has emerged as a hub for clinical research, has established superiority in IT-enabled and back-end services and has built a reputation in offering an array of specialised medical and surgical interventions at affordable prices, which have boosted medical tourism. The global health care market is highly competitive; therefore, there is a need for suitable export strategies to effectively tap into the potential of the individual markets.

Keywords

Trade in healthcare, India in health services, health service prospects

Introduction

Health care services have become increasingly globalised. Regarded as the new phase of development, this globalisation is being facilitated by advances in information and communication technology, liberalisation of foreign investment, increased international mobility of patients and demographic dynamics. Multilateral negotiations on health care services are conducted under the General Agreement on Trade in Services (GATS) with the aim to regulate restrictions on international trade.

In the last two decades, health care services have grown rapidly across the globe. It has been estimated that the sector generated \$13.31 trillion business in 2012, with the developing countries accounting

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for \$2.67 trillion or 20 per cent of the total, and is expected to grow by 17 per cent per annum till 2017. The Indian health care sector is estimated to be the size of \$100 billion by 2015, growing 15 per cent per year. It is expected to touch \$280 billion by 2020 (Overseas Indian Facilitation Centre [OIFC] 2013a). According to the Investment Commission of India, the health care industry is driven by a number of factors such as increase in life expectancy and rise in income levels. The prime objective of this article is to examine the role of India in international health care services. And find the ways to enhance its growth in years ahead.

As demand for health care services increases, it will pose both challenges and opportunities. During 2000–2012, foreign direct investment (FDI) inflow in hospitals and diagnostic centres was \$1,597 million; medical and surgical appliances, \$604 million; and drugs and pharmaceutical sector, \$10,318 million (India Brand Equity Foundation 2012).¹ Health care providers in India plan to spend \$1.01 billion on information technology (IT) products and services by 2015. At present, the market is dominated by unorganised investors (OIFC 2013b). Apart from this, private sector investments will crucially contribute to the development of hospital industry, which comprises around 80 per cent of the total market (Chanda 2011). India attracts patients mostly from Africa, Gulf and South Asian countries, who come mainly for organ transplant and treatment of orthopaedic, cardiac and oncology problems since the cost for treatment is low as compared to Western Europe, North America and the Southeast Asian countries. Medical tourism market is expected to expand at an annual rate of 27 per cent to reach \$3.9 billion in 2014 from \$1.9 billion in 2011 (India Brand Equity Foundation 2013).

Status of Health Care in India

Ever since independence, the health care sector has never been on the priority list of either the state governments or the central government. It is only in the last few years that the sector has assumed importance due to the boom in both public and private sector investments. Though public expenditure on health care has risen above the level of 0.9 per cent of gross domestic product (GDP), it is lower than most of the countries in the world (Sen and Dreze 2002, 202). The share of public expenditure to total health care expenditure in India is around 15 per cent; the average for sub-Saharan Africa is 40 per cent; and for high-income European countries, it is over 75 per cent (Sen and Dreze 2002, 204, cited in Amrith 2009). The low per capita income dictates the spending on health care. This fact is evident in all developing countries. The proportion of money spent from GDP indicates this trend. Table 1 shows the Indian scenario.

Per capita expenditure on health care is extremely low in India as compared to many countries (see Table 2). It is also far below the average per capita spending of global expenditure of \$842 (WHO 2013). The urban and rural differentials are substantial and the gap is widening. Further, the

Table 1. Spending as a Percentage of GDP in Select Countries in 2009

Country	% of GDP	Country	% of GDP
India	4.0	China	5.4
Brazil	9.3	US	17.9
UK	9.4	Japan	10.1
South Africa	8.8	South Korea	7.5

Source: World Health Organization (WHO 2013).

Table 2. Per Capita Expenditure on Health Care in 2012 in Select Countries (in US\$)

Countries	Expenditure	Countries	Expenditure
India	61	China	322
Brazil	1,056	South Africa	645
South Korea	1,703	Japan	4,752
UK	3,647	US	8,895

Source: WHO (2013).

hospital bed density in India had stagnated at 0.9 per 1,000 population since 2005, and fell significantly short of WHO laid guidelines of 3.5 per 1,000 patients' population. In 2012, there were 12,760 hospitals having 576,793 beds in India; out of these, 6,795 hospitals were in rural areas with 149,690 beds and 3,748 hospitals were in urban areas with 399,195 beds. The average population served per government hospital is 90,972 and the average population served per government hospital bed is much less at 2,012 (Kumar and Gupta 2012). There were 314 medical colleges and 289 colleges for BDS (Bachelor of Dental Surgery) courses in India (India Brand Equity Foundation 2013a) in 2012. In spite of these inadequacies, India is one of the main players in international trade in health care services.

GATS and Health Care Services

Trade in health care services is conducted under the GATS. It was negotiated by some 120 governments and came into force in 1995. Its aim was to create a favourable climate for trade in services and thereby promote economic growth. It does so by allowing countries to make binding commitments to reduce trade barriers. For example, using telemedicine, doctors in one country can study X-rays and make diagnoses for patients living elsewhere. Similarly, telesurgery allows doctors to perform surgery on a patient living in a distant location. Opportunities to acquire cheap and better treatment from physicians abroad abound. The GATS covers health care services that fall within one of the four different modes of supply. Table 3 provides definitions, explanations and examples for each mode of supply.

Services are supplied or traded through more than one mode. Technology renders feasible supply of all services through cross-border supply (mode 1), with very few exceptions. The distinction between mode 3 and mode 4 is that while the supply of services through commercial presence is more focused on the local establishment of foreign legal entities, supply of services through the presence of natural persons is concerned with the country of origin of the person supplying the service (Herman 2009).

The GATS contains two kinds of rules, namely, conditional and unconditional. While conditional rules apply to a given service sector only if a country has formally and explicitly committed to maintaining a certain degree of openness to trade in that sector, unconditional rules apply to a country's entire service sector. Of the various unconditional rules that apply to all trade in services, two are important. First, members must not discriminate between suppliers from different countries. Under the most favoured nation (MFN) treatment clause, a country must apply the same conditions and privileges to service suppliers from all countries. Second, the countries must maintain transparency with regard to their trading practices. Specifically, they should inform other members and the Council for Trade in Services about new laws or changes to existing laws and regulations that might substantially affect trade in services covered by their specific commitments under the GATS (Adlung and Carzaniga 2001).

Table 3. Four Modes of Services Supply

Mode	Definition	Explanation	Example
1	Cross-border supply	The service crosses the border, while the supplier and consumer remain in different territories.	Sale of translation services from country A to country B via the Internet.
2	Consumption abroad	The consumer crosses the border to the territory of the supplier and consumes services there.	The purchase of hotel accommodation (tourism services) by a tourist from country A when travelling in country B.
3	Commercial presence	The supplier crosses the border to the territory of consumption and establishes a commercial presence.	The local establishment of a branch of a bank from country A in country B.
4	Presence of natural persons	Temporary movement of labour to the consumer's territory. This movement can be either as an intra-corporate transferee, self-employment or salaried labour.	The employment of a person from country A as an engineer in country B.

Source: Herman (2009).

The GATS allows individual countries to decide which sectors, including sub-sectors, they want to commit to the conditional rules, which are more specific and demanding than the unconditional rules. This allows countries to decide as to what degree of openness to trade they wish to maintain in a particular service area. Countries vary both in number and choice of sectors or sub-sectors they have committed, and in the degree of openness to trade they agree to maintain in committed sectors. The variations can be observed in the commitments made by the countries within the four health care industry sub-sectors: medical and dental services; services provided by medical personnel; hospital services; and other human health services (Belsky et al. 2004) (see Table 4).

The number of sectors committed by each WTO member is positively related to its level of economic development. The country pattern of commitments is highly diffused. For example, Japan and the United States (US) have scheduled only one commitment, whereas developing countries have taken more commitments (see Table 4). Of the four sub-sectors, medical and dental services are heavily committed (53 members), followed by hospital services (44 members) and services provided by nurses, midwives, etc. (29 members). This suggests that it is easier, either politically or economically, for administrations to liberalise capital-intensive and skill-intensive sectors than labour-intensive activities.

What are the main factors that can explain the shallow level of commitments on health care services? An obvious reason is the existence of government monopolies which offers free or low-cost services. At least under mode 3 (commercial presence), making assumptions about external policy bindings—if private activities are either prohibited or rendered commercially unattractive—also does not help. Many countries with a public health sector have also private suppliers. The mere fact that commercial providers are able to survive suggests that the public and private segments do not compete directly. For instance, there may be differences in waiting period, quality of equipment or types of treatment offered. Nevertheless, given the prevailing policy patterns in many countries, the potential for trade under mode 3, and consequently for meaningful commitments, may have been lower in health care services sector than in many other areas (Woodward et al. 2001).

Many governments, due to lack of export interests, may not have voiced their request for progressive liberalisation in the Uruguay Round negotiations. Unlike the US, which played a significant role in the

Table 4. Specific Commitments of World Trade Organization (WTO) Members on Individual Health Care Services (only selected countries)

Selected Members	Medical and Dental Services	Nurses, Midwives, etc.	Hospital Services	Other Human Health Services
Australia	x			x
Austria	x	x	x	x
EU (12)	X	X	X	
Finland		x		
India			x	
Japan			x	
Jordan	x	x	x	x
Kyrgyz Republic	x	x	x	x
Malaysia	x		x	x
Mexico	x	x	x	
Norway	x	x		
Pakistan	x		x	
South Africa	x	x		
Sweden	x	x		
Switzerland	x			
US			x	
Zambia	x	x	x	x

Source: WTO (1998).

- Notes:**
1. Out of 54 countries, only 17 are taken in the table. By and large, the developing countries have made more commitments.
 2. A large number of countries, including Argentina, Brazil, Canada, Chile, Cuba, Indonesia, New Zealand, Republic of Korea, Sri Lanka, Thailand, etc., have not made any commitments.

telecommunication and the financial sectors, there were apparently no trendsetters in these negotiations. The commitments ultimately made for the most significant mode for many health care services, that is, mode 3, may have been inspired by the intention to both overcome shortages of physical and human capital and promote efficiency through FDI and supplies of skills and expertise.

While making a comparison across all schedules and sectors, it is seen that trading conditions for mode 4 are more restrictive than for other modes. Due to the political constraints involved, many members have limited the entry of natural persons to intra-corporate transfers or to highly skilled experts that are not domestically available. This contrasts with the conditions for mode 2 (consumption abroad), which tends to be most liberal. Cases in point include the exclusion of health treatment abroad from domestic support (subsidies and reimbursements) schemes. Mode 2 may prove economically significant in sectors such as education and health care, where consumer movement can be viewed as partial substitute for the movement of personnel under mode 4 and inward direct investment under mode 3.

Commitments concerning individual health services largely follow this pattern. Commitment towards the highest share of full market access is recorded for mode 2 (consumption abroad); it reached 85 per cent in the hospital sector. The perspective of developing countries, which may be competitive suppliers in this area, reflects an understanding that nearly all relevant commitments scheduled by developed country members are without limitation (see Table 5 and mode 2: hospital services), thus amounting to a legally enforceable guarantee not to dissuade their residents from purchasing services abroad. In other sub-sectors, however, developed countries tend to enforce limitations on modes 2 and 3 more frequently than developing

Table 5. Number of WTO's Developed Country Members with Specific Commitments on Health Care Services, July 2000

		Medical and Dental Services	Nurses, Midwives, etc.	Hospital Services	Other Human Health Services
Total (out of 44 schedules)		18	17	15	2
Market access					
Mode 1	Full	4(-1)	2(-1)	0	0
	Partial	1	1	0	0
	Unbound	13	14	15	2
Mode 2	Full	5(-1)	2(-1)	14	0
	Partial	13	15	1	2
	Unbound	0	0	0	0
Mode 3	Full	2(-1)	2(-2)	0	0
	Partial	14	15	15	2
	Unbound	2	0	0	0
Mode 4	Full	0	0	0	0
	Partial	16	17	14	2
	Unbound	2	0	1	0
National Treatment					
Mode 1	Full	4	2	0	0
	Partial	1	1	0	0
	Unbound	13	14	15	2
Mode 2	Full	5	2	14	0
	Partial	13	15	1	2
	Unbound	0	0	0	0
Mode 3	Full	1	2	13(-13)	0
	Partial	16	15	2	2
	Unbound	1	0	0	0
Mode 4	Full	0	0	0	0
	Partial	17	17	14	2
	Unbound	1	0	1	0

Source: WTO (1998).

Notes: 1. European Union (EU) member states are counted individually.

2. Figures in parentheses are reduced number of full commitments if horizontal limitations are taken into account.

3. Latest data not available.

countries (see Table 6). As for mode 4, none of the members have undertaken full commitments in any of the four health care sub-sectors. All other services, commitments in this mode are subject to limitations and restrictions.

In comparison, developing countries have made more market access commitments in medical and dental services, while less in other segments. They have also retained more flexibility in the implementation of the modes (see Table 6).

In case of hospital services, some schedules contain footnotes which explain that a non-commitment under mode 1 is attributable to the impracticable nature of such supplies. However, a question arises as to whether the administrations involved have contemplated all rationally conceivable possibilities of combining traditional health care services with modern communication technologies. For instance, in case of trends in telehealth, the provision of medical consultation across borders via electronic medium

Table 6. WTO's Developing Country Members with Specific Commitments on Health Care Services, July 2000

		Medical and Dental Services	Nurses, Midwives, etc.	Hospital Services	Other Human Health Services
Total (out of 44 schedules)		36	12	29	15
Market Access					
Mode 1	Full	12(-1)	6	15	8
	Partial	10	3	0	2
	Unbound	14	3	14	5
Mode 2	Full	23(-2)	8	24	10
	Partial	11	4	3	4
	Unbound	2	0	2	1
Mode 3	Full	13(-5)	4	16(-7)	10(-4)
	Partial	19	7	11	5
	Unbound	4	1	2	0
Mode 4	Full	0	0	0	0
	Partial	33	11	25	15
	Unbound	3	1	4	0
National Treatment					
Mode 1	Full	15	6(-1)	18(-2)	10(-2)
	Partial	8	3	0	1
	Unbound	13	3	11	4
Mode 2	Full	23(-2)	8(-1)	24(-3)	11(-3)
	Partial	9	4	3	3
	Unbound	4	0	2	1
Mode 3	Full	17(-1)	7(-1)	18(-12)	9(-6)
	Partial	15	4	8	5
	Unbound	4	1	3	1
Mode 4	Full	1	0	2(-1)	0
	Partial	32	11	25	15
	Unbound	3	1	2	0

Source: WTO (1998).

Notes: 1. Includes Central and East European transition economies.

2. Figures in parentheses are reduced number of full commitments if horizontal limitations are taken into account.

3. Latest data not available.

could actually be categorised as a 'hospital service', an interpretation not necessarily anticipated by all members at the time of scheduling. From the legal standpoint, this should not be a matter of concern: new technologies would not turn a non-commitment, even if attributed to technical constraints, into a binding access obligation (Adlung and Carzaniga 2001).

Commitments do not carry the same weight across all sectors and modes. Their economic value may be high only in certain cases, for example, midwifery services under mode 4, but not in others. In a like manner, the restrictiveness of similar limitations (for example, discriminatory subsidies and nationality requirements) can differ widely among sectors. Uncertainties may remain as regards measures scheduled in individual cases, for instance, in regard to the licensing requirement for doctors or hospitals, which may be operated either for the purpose of quality or for restrictions on access. In the former case, scheduling is not necessary, as quality-related measures do not fall under either the market access provisions of Article XVI or national treatment obligations of Article XVII of GATT. In contrast,

if quantitative restrictions were involved, it would be better to schedule the size, time frame and other relevant features rather than depending on the existing implementation mechanism.

GATS Limitations in Trade in Health Care Services

With respect to making an assessment of the limitations made by individual members, it is necessary to inspect both horizontal and sector-specific parts of the schedules. Horizontal limitations like foreign exchange restrictions, foreign equity ceilings and restrictions on physical presence of foreign suppliers, when applied across all committed sectors, echo economy-wide policy concerns and objectives. Also, the restrictive effects associated with such limitations may be matched by other barriers not recorded in the schedules, like recognition of foreign licences, qualifications or standards.² On the other side, under modes 1 and 2 (cross-border trade and consumption abroad), relatively few limitations that apply to health care services are sector specific and largely concern the non-portability of insurance entitlements. However, while evaluating sector-specific limitations, it is important to take horizontal factors into account since the relationship between both forms of commitment can become complicated in some cases.

Mode 3 (commercial presence: mostly sector-specific limitations) and mode 4 (presence of natural persons: mostly horizontal limitations) have drawn the highest share of partial or limited commitments. Some countries, most of them developed, have retained the right to restrict the incorporation of foreign health care providers on a commercial basis while limiting their mode 3 commitments.

In a few cases, restrictions on both foreign equity participation and permissible types of legal incorporation have been scheduled as market access limitations for mode 3. Such restrictions may be intended to encourage transfer of technology, skill and expertise, and are mostly contained in the horizontal sections of the concerned schedules. Frequent market access limitations scheduled under mode 4 concern quantitative restrictions like setting a ceiling on the number of foreign employees or denying access to all persons not considered to be specialist doctors, etc. Typical national treatment limitations under mode 4 relate to training and language requirements (WHO and WTO 2002).

Majority of the entry barriers exist in the form of economic needs test (ENT)—frequently referred to in modes 3 and 4, mostly for hospital services, including medical and dental services. Such barriers ascertain the need for entry into a country as well as the number of people allowed to enter. GATS guidelines provide that all entries relating to an ENT ‘should indicate the main criteria on which the test is based’.

A relatively large number of mode 4 commitments are limited to trainees. Their significance depends on the ability of a foreign supplier to establish a commercial presence under mode 3. This tends to be more difficult for exporters of medical personnel in developing countries than for those in developed countries, given the current investment patterns, and could prove elusive in those large segments of health care sector where private entrepreneurial activity is either not admitted or commercially unattractive (Blouin et al. 2006).

While new telecommunication technologies like telediagnosis and teleanalysis have reduced the impact of geographical barriers to trade, rising incomes and enhanced information have increased the mobility of potential patients. However, there are limits to which governments can influence the level and structure of trade in health care services through various instruments. For example, while non-portability of insurance cover may deter many residents from seeking treatment abroad, it will not deter the affluent. Further, administrative restrictions may prevent publically controlled facilities from offering

telemedical services, but cannot hold private service providers from filling of any ensuing market niches (Adlung and Carzaniga 2001).

It is true that while reliance on foreign investment is a more viable development strategy because it is associated with resource inflows, labour migration is tantamount to a loss of human capital. But, is receiving remittances a sufficient compensation? Many empirical studies confirm it is positive. However, such migration causes loss of skilled human capital to the developing countries.

Concerns have been raised that health care sector liberalisation may cut both ways for developing countries. First, GATS does not impose constraints on terms and conditions (for example, subjecting the services provided to special taxes or charges) under which potential host country treats foreign patients. Second, there are no legal impediments in GATS that would affect the ability of governments to discourage qualified staff from seeking employment in the private sector, whether at home or abroad. But, positive measures such as liberalisation under mode 3, combined with foreign countries commitments under mode 2, may help limit the risk of brain drain. Third, any disadvantage to the resident patients cannot be addressed through domestic regulations under the GATS provisions.

Trade Dimension of Health Care in India

India's health care sector, which stood at \$79.1 billion in 2011, is expected to reach \$158.2 billion by 2017 (India Brand Equity Foundation 2013b) at a rate of 15 per cent per annum. The market segment is dominated by the hospital industry with a share of 71 per cent, and that of pharmaceuticals is 13 per cent, medical equipment and supplies, 9 per cent, medical insurance, 4 per cent and diagnosis, 3 per cent. Rising incomes levels, ageing population and changing sensibilities towards preventive health care is expected to drive up the demand for health care services. Also, India has emerged as a global hub for research and development (R&D) activities, given the relatively low cost of conducting clinical research. Conducive policies for encouraging FDI, tax benefits and promising growth prospects have helped the sector to attract private equity and venture capitals from foreign players.

In India, an increase in the demand for specialised health care services has been linked to the shift from communicable to lifestyle diseases, particularly in tier II and tier III cities. As a result, the concept of health insurance is gaining momentum. The Indian health insurance industry expanded at a compound annual growth rate (CAGR) of 33 per cent during 2006–2012. This trend is likely to continue in the coming years. The share of population having medical insurance is likely to rise to 20 per cent by 2015 from 2 per cent in 2006. Apart from this, strong mobile technology infrastructure and launch of 4G is expected to further drive mobile health³ initiatives. Health care sector's spending on IT products and services is expected to rise to \$67 billion in 2015.

The presence of world-class hospitals and skilled medical professionals has strengthened India's position as a preferred destination for medical tourism. The growth in this sector is underscored by the cost advantage that India provides to patients. The medical tourist market is expected to expand at a CAGR of 27 per cent to reach \$4.6 billion and the inflow of medical tourists is expected to cross 300 million by 2015. Traditional health care treatments—yoga, ayurveda, naturopathy, etc.—are equally popular among medical tourists. Its market in India was valued about \$1.4 billion in 2010 and is expected to grow by 20 per cent during 2011–2017 period (India Brand Equity Foundation 2013b).

The market size of private hospitals in India, estimated at \$54.7 billion in 2012, has fuelled the growth of the private sector (accounting for 82 per cent). To encourage further growth, the government has extended the benefits of Section 10(23G) of the IT Act. And, to encourage investments in rural health

care services, the benefits of section 80-IB have been extended to new hospitals. These hospitals are entitled to 100 per cent tax deduction on profits earned over the last five years. Customs duty on life-saving equipment has been reduced to 5 per cent from 25 per cent in 2013, while import duty on medical equipment has been slashed to 7.5 per cent.

India in World Health Care Market

While there are no explicit barriers on commercial presence of foreign firms, there are restrictions on foreign services providers under mode 4. In case of medical and dental services, services provided by physiotherapists, nurses, midwives and paramedical personnel and hospital services, India has no limitations on market access and national treatment under mode 2. Under mode 1, there are no national treatment or market access restrictions for the provision of services on provider-to-provider basis, such that the transaction takes place between established medical institutions covering areas of second opinion on the diagnosis or in the field of research. In case of mode 3, market access is only through incorporation with a foreign equity ceiling of 74 per cent, subject to two conditions: (a) that the latest technology for treatment will be brought in; and (b) Foreign Investment Promotion Board's (FIPB) approval will be gained in case of foreign investors having prior collaboration in that specific service sector in India. In case of national treatment under mode 3, publically funded services may be available only to Indian citizens or supplied at differential prices to persons other than Indian citizens. Mode 4 is unbound, except for horizontal commitments related to entry visas. Technology-oriented services in health care, particularly IT-aided health care (application of IT for the use of health care resources) and health-related IT services (IT services arising from health care), have added new dimensions to Indian health care segment (Mathur 2004).

India has become an attractive destination for medical process outsourcing under mode 1. Cross-border trade in health care services includes both e-health and telehealth services to provide diagnostic (teleradiology) services, medical opinion and consultations (telemedicine), laboratory testing, transmission and processing of specialised data and records (medical transcription), medical coding and medical billing. India is a leading exporter of telepathology, teliagnostic and medical transcription services (Smith et al. 2009). Also, use of IT in health care enables direct supply of services between two countries. This includes diagnostic and testing facilities, health-related advice, health information and health data mining.

India registered high growth under mode 1 services during 2000–2005. The number of employees in IT-related health care services increased from 30,551 in 2000 to 242,500 in 2005. Revenue earned from these services increased from \$264 million to \$4,072 million during the same period. The rise is more than 15 times (India Brand Equity Foundation 2013). India is involved in \$5,429 million Pan-African e-Network Project, which connects Indian establishments with 53 African countries through satellite and fibre optic connections to provide tele-education and telemedicine services. Five prominent Indian universities are involved in the tele-education project, while 12 super-speciality hospitals are engaged in providing telemedicine services under the said project. Apollo Hospitals group serves several other countries such as Bangladesh, Nepal, Bhutan, Myanmar and Kazakhstan through telemedicine and teleradiology services, and has partnered with Health Services America for medical coding and billing, documentation of medical records and insurance claims processing.

Outsourcing of health care services has gained momentum in recent years with the advent of the Internet era. Over 60 per cent of health care companies outsourced more than 50 per cent of their IT operations by 2009 in the US. The medical outsourcing market was worth over \$19 billion in 2010.

More than 180 companies were engaged in medical transcription in India, with the average annual revenue of \$250 million in 2010. This is likely to increase in the near future, given factors such as the increasing health care costs of the ageing population in Europe and the US and the need to digitise medical records. These activities have come to India to leverage the cost advantage through offshore outsourcing. According to the American Association for Medical Transcription (AAMT), the global market for medical transcription is estimated to be between 12–20 billion dollars, with the US being the largest market. Around 60 per cent of medical transcriptions in the US are outsourced from hospitals and clinics, wherein about 10 per cent is offshored to India and the Philippines. According to the Indian Medical Transcription Industry Association (IMTIA), India's share is about \$200 million (2 per cent of the US market). Medical billing outsourcing services include doctors billing, insurance claims, patients' collections, accounting and generating reports for physicians' practice, diagnostic service groups and hospitals. India is becoming the primary and preferred destination for quality medical billing services, especially for American companies. It has become the 'back-office' of the world. The market for medical billing outsourcing is estimated at about \$1 billion.

The medical tourism industry was valued at \$10.5 billion globally in 2012 and is estimated to reach \$32.5 billion in 2019. In 2011, the medical tourist flow to India was 850,000 and the number is expected to reach 3,000,000 in 2015 (KPMG and ASSOCHAM 2011). The ever-expanding role of technology in making drugs, medical devices and equipment and conducting procedures (for example, organ transplantation), has helped rise above traditional ways of thinking. Specialised medical and surgical interventions at competitive international prices have not only enhanced the quality of life and improved the health status, but have also earned India international repute (see Table 7).

Indian government is promoting medical tourism by organising campaigns overseas through the Ministry of Tourism. From 2005, it started granting both 'M' and 'MX' categories of visa to foreign patients and attendants to facilitate their arrival in India. The rendering of health care services on payment in foreign exchange has been treated as 'deemed exports' and these will be eligible for fiscal incentives extended to export earnings. Some hospitals such as Apollo, Fortis, Medanta and Wockhardt are collaborating with tour operators to offer all-inclusive health tourism packages.

India has become increasingly open to FDI by allowing equity up to 100 per cent. Several speciality corporate hospitals are being built in collaboration between Indian and foreign companies, including

Table 7. Relative Cost of Selective Surgeries (India in US\$ and others higher in times)

Surgery	India (in US \$)	Cost in Comparison to India		
		US	Thailand	Singapore
Heart bypass	10,000	13.00	1.10	1.85
Heart valve replacement	9,000	17.78	1.11	1.39
Angioplasty	11,000	5.18	1.18	1.18
Hip replacement	9,000	4.78	1.33	1.33
Hysterectomy	3,000	6.67	1.50	2.00
Knee replacement	8,500	4.71	1.18	1.53
Spinal fusion	5,500	11.27	1.27	1.64
Bone-marrow transplant	30,000	10.00	–	–
Liver transplant	40,000	7.50	–	–
Neurosurgery	8,000	3.63	–	–
Cosmetic surgery	3,500	10.00	–	–

Source: Smith et al. (2009).

a \$40 million cardiac centre, set up under a consortium comprising India, Australia and Canada (Chanda 2002). India's Apollo group has established hospitals outside the country and invested over \$4 billion to build 15 new hospitals in Nepal, Sri Lanka and Malaysia. Total FDI inflows into India in hospitals and diagnostic sector for the period 2000–2011 were estimated to be \$1 billion according to the Department of Industrial Policy and Promotion, Government of India. The private equity fund investment has been over \$2 billion in health care and life sciences sector during the last five years. Further, India received \$32,837 million as aggregate FDI in 2011, specifically hospitals and diagnostic centres, which received FDI worth \$1,030 million from 2000 to 2011, constituting 0.78 per cent of total FDI into India. FDI equity inflows received by hospitals and diagnostic centres have been increasing and by the end of 2012, it was to the extent of \$1,395.82 million (Sunitha and Ajil Babu 2013). According to one estimate, foreign investors have tapped only 10 per cent of Indian health care market (Cattaneo 2009, 8). It is perceived that there will be increased inflow of foreign funds into India's hospital segment in the near future, with major expansion plans by existing and prospective corporate players.

The reasons for limited presence of foreign investment in Indian hospitals reveal a number of external and domestic constraints. These include facts like the number of foreign players is limited, there are many competing investment destinations and there are difficulties for foreign players who seek to enter independently and in maintaining joint ventures. Additionally, the gestation period in hospital projects is long and investors may not be willing to make such a long-term commitment. More importantly, various domestic factors adversely affect the returns to investment in hospitals in India: high initial establishment costs, low health insurance penetration, high cost of importing medical devices and lack of policy clarity, among others. The Indian experience shows that a liberal foreign investment policy is not enough to secure a strong foreign participation.

According to United Nations Conference on Trade and Development (UNCTAD), the number of mergers and acquisitions in the health care sector has boomed in recent years. It was \$14 billion in 2006 and it touched a figure of \$22 billion in 2013 at the global level. Acquisitions are more in the case of pharmaceutical companies rather than in hospitals. The acquisition amount from the foreign companies amounted to \$10,458 million during the period 2006–2010 in India.

Indian health care service companies are also involved in merger activities. For instance, Fortis International is involved in primary and tertiary health care and diagnostics, including two dental clinics. It has a presence in nine countries across the Asia-Pacific. Fortis International acquisitions include a hospital in Singapore, followed by acquisition of hospitals in Australia, Hong Kong and Sri Lanka, besides a diagnostic service firm in Dubai. Fortis India has grown organically and through acquisitions, having scaled up operations from a single hospital in 2001 to 62 hospitals and 190 diagnostic labs across India by 2013. Fortis International owns Quality Healthcare Ltd, the largest primary care network in Hong Kong. In 2011, Fortis acquired a 65 per cent stake in Hoan My Medical Corp., one of Vietnam's largest private health care provider groups with over 1,100 beds across six hospitals (Srivastava and Unnikrishnan 2011). Apollo Hospitals has expanded its global reach with the opening of Apollo Bramwell Hospital in Mauritius. It proposes to set up a 200-bed hospital in Shanghai, besides a 150-bed hospital in Nigeria.

Mode 4 covers the movement of health personnel—physicians, specialists, nurses, paramedics, midwives, technicians, consultants, trainers, health management and other professionals. From the source country's perspective, the increased mobility of health care providers can generate remittances and transfers, help promote exchange of clinical knowledge among professionals and upgrade skills and standards. For the host country, the movement of health personnel provides an important means to meet the shortage of health care providers, improve the quality of and accessibility to health care services and contain cost pressures. If these outflows are permanent, there are likely to be adverse implications

for equity, quality and availability of health care services in the source countries, and the bulk of cross-border flows of health care professionals will take the form of permanent migration.

Benefits and Risks of Health Care Services Exports

Under mode 1, exports increase the revenues of domestic health care services providers, allow further investment and improve both profitability and competitiveness. At home, they help prevent international brain drain. Exports under mode 2 have similar effects. The spillover effects will depend on the legal/regulatory framework and business model adopted by the exporting country. To sum up, a properly designed strategy to export health care services under mode 2 has the potential of improving access to better quality services for the local population (Cattaneo 2009). Exports under mode 3 are returns on investment (similar to those in any other sector), while those under mode 4 could be an important source of income (which would directly benefit the local population, and hence public health). Benefits for the exporting country's health care system are only indirect. Temporary movement abroad provides local health care providers with a number of opportunities, including access to training, new technologies, acquisition of additional skills, etc. Upon return to their country of origin, these health care providers will ensure that the local population benefits from their skills acquired abroad.

Under modes 1 and 2, the main risk is the diversion of scarce human and financial resources towards the treatment of foreign patients. This may lead to internal brain drain. Exports of health care services, therefore, represent a challenge for the objectives of universal access and equity of access to quality health care services. The internal brain drain represents a loss of public investment in medical education and training. A number of accompanying policies could help minimise these diversion risks, including through cross-fertilisation of public and private health initiatives (Herman 2009). The export-related risks under mode 4 depend on the intentions of the migrants. Brain drain can have dramatic effects on the health of the local public; therefore, 'brain circulation' or temporary movement of health personnel should be encouraged. Opportunities for individuals can work out into losses for societies. This is particularly true for the health care sector, where the medical specialist density varies across countries and regions (Jutamas and Fink 2007). Thus, a well-regulated trade under mode 4 can contribute to preventing brain drain.

Measures to Enhance Trade in Health Care

India is relatively competitive at offering health care services, particularly under modes 2 and 4. However, appropriate strategies have not yet been designed to promote health care services. There is a need for assessing and fixing the fundamentals, including the regulation of the health care sector, because a dysfunctional domestic health care system can weaken competition in the health care services market. An assessment of the policies designed to exploit the strengths and remedy the weaknesses will help determine whether a country can enter and contest in the global health care services market. The analysis for India reveals that it has a competitive edge in terms of skilled doctors and trained nurses. In terms of international prices, the service costs are also lower. Availability and quality of treatment is at par with international standards. Doctors, especially those educated and trained abroad, have a good reputation. The nursing standards, too, are much appreciated by foreign patients. While many hospitals and clinics have adopted international management and hygiene standards (ISO certified), the private sector hospitals are better in terms of quality and practices. Also, the size of the hospitals is relatively big

with 200–350 beds. Advantages under mode 4 indicate that Indian doctors are skilled in disease diagnosis and treatment, particularly in surgery.

Quality remains the main driver of trade in the health care sector: entry costs in the health care services market are very high in terms of education, training and equipment. Given a highly competitive global market, merely fixing the fundamentals, including the regulatory framework, to become an exporter of health care services does not serve the purpose. Trade promotion strategy is as essential to gain market shares abroad. In this strategy, the private sector's role is critical, but the government is the major player. Export strategies should be based on 'niches and market prospects'. A country should select the appropriate mode for trade in health care services. Health care services under mode 2 suggest that all markets are not contestable. To design efficient export promotion strategies, it is important to tap into the knowledge of foreign markets—health care needs, medical personnel density and shortages, health insurance coverage gaps, etc.

Conclusion

Over the last two decades, the health care industry has grown rapidly. It has also acquired a new dimension with advancements in information and communication technology, liberalisation of foreign investments and increased international mobility. At the global level, the GATS aims to create a conducive climate for trade in services, thereby allowing participating countries to decide in which sub-sector they wish to commit to the conditional rules. Despite allowing the member countries the freedom to decide the degree of trade openness to be maintained in the committed sectors, it has not helped achieve liberalisation of trade in health care services as contemplated. Therefore, there is a need to develop a comprehensive framework to further liberalise trade.

The health care market is highly competitive at the international level. India should assess its human and financial resources and accordingly design trade promotion strategies. Though India has a clear advantage under modes 2 and 4, it is essential to have a supportive policy back-up. An elaborate strengths, weaknesses, opportunities and threats (SWOT) analysis should be undertaken to enhance competitiveness in the global market. Since reputation and quality are the main drivers of trade in health care, multilateral agreements under GATS are the best instrument to enhance trade. So far, the progress achieved is limited. Therefore, India should make use of bilateral and regional agreements to gain market access, thereby promoting trade in health care.

Notes

1. They obtained information from the Department of Industrial Policy and Promotion, Government of India.
2. For instance, a public health insurer may refuse reimbursement of the cost of treatment abroad on the grounds that the services involved are of lower quality than those offered domestically. Herein, it may become difficult to challenge such practices under the GATS.
3. The term 'mobile health' (mHealth) is used to describe the practice of medicine through the use of mobile and wireless technologies.

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