Medical Tourism in India: Progress, Opportunities and Challenges

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K.R. Shanmugam
Abstract

Although the medical tourism is a recent phenomenon, this sector grows exponentially and emerges as a major force for the growth of services exports worldwide. India is one of the major players in this industry. Soaring medical costs, high insurance premiums, increasing number of uninsured and under insured people in developed nations, long waiting period in the home country, availability of high quality health care services at affordable rate, and internet/communication channels in developing countries, cheaper air fares, and tourism aspects are the driving forces of the outbound medical tourism. Currently India hosts about 1.27 million medical tourists from industrialized countries like UK and USA and from its neighboring countries such as Bangladesh, Sri Lanka, and China. Its foreign exchange earning from medical tourism is around US $ 1.8 billion. But it faces intense regional competitions from Malaysia, Singapore and Thailand.

Against this backdrop, this study attempts to analyze (i) the trends in foreign tourist arrivals in India and foreign exchange earnings from them, (ii) the factors favoring the growth of medical tourism in India, including the initiatives of government and industry (iii) the opportunities available for India to make further progress and (vi) the challenges facing the industry. Since the data on the exact number of medical tourist arrivals and revenues are not readily available, this study attempts to estimate the number of medical tourists and earnings from them till 2015. The projection indicates that the number of medical tourist in India is likely to reach 2.8 million and the market will be around US $ 4 billion by 2015. Further, it demonstrates a simple Ricardian model of trade for healthcare industries in two model countries (India and South Korea) and shows how they can gain from trade.

Keywords: medical tourism, healthcare, foreign exchange, comparative advantage, gains from trade.

JEL Code: I12, I18, I38
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Chapter 1
INTRODUCTION

A journey that patients take from one country to another country to get cost effective and efficient medical treatment, followed by a great vacation at some of the most beautiful locations is called medical tourism. In simple terms, the medical tourism refers to “visit by overseas patients for medical treatment and relaxation”. Thus, it is an amalgamation of two distinct services: healthcare and tourism.

Although the medical tourism is a recent phenomenon, this sector grows exponentially and emerges as a major force for the growth of services exports worldwide. Currently, it is a multi billion dollar industry. Countries like Belgium, Costa Rica, Cuba, Dubai, Hungary, India, Israel, Jordan, Malaysia, Singapore, South Africa, Thailand etc are actively involved in medical tourism.

Soaring medical costs, high insurance premiums, increasing number of uninsured and under insured people in developed nations, long waiting period in the home country, availability of high quality health care services at affordable rate and internet/communication channels in developing countries, cheaper air fares, and tourism aspect are the driving forces of the outbound medical tourism. Now more and more overseas patients travel abroad to get medical treatments, which include electric procedures as well as complex specialized surgical procedures such as joint replacements (hip/knee), cardiac surgeries, cosmetic surgery, and dental surgery.

India is one of the major players in this industry. Currently, it hosts about 1.27 million medical tourists from industrialized countries like UK, USA and Canada and from its neighboring countries such as Bangladesh, Sri Lanka, and China. Its foreign exchange earning from medical tourism is estimated to be around US $ 1.8 billion. But it faces intense regional competitions from Malaysia, Singapore and Thailand.

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1 It mixes leisure, fun and relaxation together with wellness and healthcare. According to UNESCAP (2007), medical travel refers to the international phenomenon of individuals traveling, often great distance, to access healthcare services that are otherwise not available due to high costs, long waiting lists, or limited health care capacity in the country of origin……Medical travel is often referred to as medical tourism.
2 The International Trade Commission in Geneva says that medical tourism could grow into a US $ 188 billion global business by 2013 (Government of India, 2011b).
India is one of the major democratic nations of the world. It has achieved considerable progress after initiation of reforms in 1991. It has emerged as the fourth largest economy in purchasing power. It is amongst the fastest growing nations in the world. It has made great advances in many fields particularly Information Technology (IT). With a large pool of educated English speaking citizens, India has emerged as an important outsourcing destination for many multi-national companies. It has launched its own satellites and sent a spacecraft to moon. Thus, India is booming in recent years.

India stands out for the size and dynamism of its services sector (Government of India, 2012). The share of services in India’s GDP at factor cost is nearly 65 percent. During 1990-91 to 2011-12, the GDP (factor cost) at 2004-05 prices grew at an average rate of 6.6 percent while the services GDP grew at 8.04 percent. Except in two years (1994-95 and 1996-97), services grew faster than GDP (see Chart 1.1). Interestingly for the last nine years (2003-04 to 2011-12), the GDP at factor cost (real) grew at 8.2 percent per annum while the services GDP grew at 9.6 percent. Thus, one of the striking aspects of India’s recent growth has been the dynamism of the services, particularly IT and ITES (IT enabled services). The medical tourism industry is poised to be the next big success story in India after IT (software).

**Chart 1.1: Growth Rates: GDP and Services GDP (%)**

![Graph showing growth rates of GDP and Services GDP from 1990-91 to 2011-12]

- Services
- GDPfC
Against this backdrop, this study attempts to analyze (i) the trends in foreign tourist arrivals (FTAs) in India and foreign exchange earnings from them, (ii) the factors favoring the growth of medical tourism in India, including the initiatives of government and industry (iii) the opportunities available for India to make further progress and (vi) the challenges facing the industry.

Since the data on medical tourist flows and revenues are poor, this study attempts to project the number of medical tourists and earnings from them till 2015. The projection indicates that the number of medical tourists in India will likely to reach 2.8 million and the market will be around US $ 3.96 billion by 2015. Further, it demonstrates a simple Ricardian model of trade for healthcare industries in two model countries-India and South Korea and shows how they can gain from trade.
Chapter 2

PERFORMANCE OF TOURISM INDUSTRY

Tourism is one of the major components of India’s services and engines of growth, contributing around 6.11 percent of GDP and 10 percent of employment. This sector is estimated to create 78 jobs per million Indian rupees of investment compared to 45 jobs per million rupees in the manufacturing sector (Planning Commission, 2011). The annual growth of this sector is estimated to be 8.1 percent during the last five years. Performance indicators of this industry that are shown in Table 2.1, Foreign Tourist Arrivals (FTAs), Foreign Exchange Earnings from Tourism (FEE), Domestic Tourists (DTs) and Foreign Tourist (FTs) visiting states and union territories of India and Outbound Tourists (OTs), witnessed significant growth in recent years.³

³ FTAs refer to the number of arrivals and not the number of persons. The same individual who makes multiple trips to India is counted each time as a new arrival. A domestic tourist is a person traveling within the country to a place other than his/her usual place of residence and stays at hotels etc for a duration of not less than 24 hours or one night and not for more than 12 months at a time for any of the purposes: pleasure, pilgrimage, business or conference meeting, study and health. A foreign tourist is a person visiting India on a foreign passport staying at least 24 hours in the country.
Table 2.1: Indian Tourism Industry: Trends in the Performance Indicators

<table>
<thead>
<tr>
<th>Year</th>
<th>Foreign Tourist Arrivals (in Million)</th>
<th>Foreign Exchange Earnings from Tourism (World (US$ Billion))</th>
<th>India's Share (%)</th>
<th>India's Rank</th>
<th>Visits to States and Union Territories (Domestic (in Million))</th>
<th>Foreign (in Million)</th>
<th>Out Bound Tourism (Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>1.68</td>
<td>4318</td>
<td>276.9</td>
<td>1.9</td>
<td>0.67</td>
<td>-</td>
<td>66.67</td>
</tr>
<tr>
<td>1992</td>
<td>1.87</td>
<td>5951</td>
<td>315.4</td>
<td>2.1</td>
<td>0.67</td>
<td>-</td>
<td>81.46</td>
</tr>
<tr>
<td>1993</td>
<td>1.76</td>
<td>6611</td>
<td>321.9</td>
<td>2.1</td>
<td>0.66</td>
<td>-</td>
<td>105.81</td>
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<tr>
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<td>1.89</td>
<td>7129</td>
<td>354.9</td>
<td>2.3</td>
<td>0.64</td>
<td>-</td>
<td>127.12</td>
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<tr>
<td>1995</td>
<td>2.12</td>
<td>8430</td>
<td>405.3</td>
<td>2.6</td>
<td>0.64</td>
<td>-</td>
<td>136.64</td>
</tr>
<tr>
<td>1996</td>
<td>2.29</td>
<td>10046</td>
<td>438.7</td>
<td>2.8</td>
<td>0.65</td>
<td>-</td>
<td>140.12</td>
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<tr>
<td>1997</td>
<td>2.37</td>
<td>10511</td>
<td>442.8</td>
<td>2.9</td>
<td>0.65</td>
<td>-</td>
<td>159.88</td>
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<td>1998</td>
<td>2.36</td>
<td>12150</td>
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<td>2.9</td>
<td>0.66</td>
<td>34th</td>
<td>168.20</td>
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<tr>
<td>1999</td>
<td>2.48</td>
<td>12951</td>
<td>458.2</td>
<td>3.0</td>
<td>0.66</td>
<td>35th</td>
<td>190.67</td>
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<tr>
<td>2000</td>
<td>2.65</td>
<td>15626</td>
<td>475.3</td>
<td>3.5</td>
<td>0.73</td>
<td>36th</td>
<td>220.11</td>
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<td>2001</td>
<td>2.54</td>
<td>15083</td>
<td>463.8</td>
<td>3.2</td>
<td>0.69</td>
<td>36th</td>
<td>236.47</td>
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<tr>
<td>2002</td>
<td>2.38</td>
<td>15064</td>
<td>481.9</td>
<td>3.1</td>
<td>0.64</td>
<td>37th</td>
<td>269.60</td>
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<tr>
<td>2003</td>
<td>2.73</td>
<td>20729</td>
<td>529.3</td>
<td>4.5</td>
<td>0.84</td>
<td>37th</td>
<td>309.04</td>
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<tr>
<td>2004</td>
<td>3.46</td>
<td>27944</td>
<td>633.2</td>
<td>6.2</td>
<td>-</td>
<td>0.97</td>
<td>26th</td>
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<tr>
<td>2005</td>
<td>3.92</td>
<td>33123</td>
<td>679.6</td>
<td>7.5</td>
<td>1.10</td>
<td>22nd</td>
<td>392.01</td>
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<tr>
<td>2006</td>
<td>4.45</td>
<td>39025</td>
<td>744.0</td>
<td>8.6</td>
<td>1.16</td>
<td>22nd</td>
<td>462.32</td>
</tr>
<tr>
<td>2007</td>
<td>5.08</td>
<td>44360</td>
<td>857.0</td>
<td>10.7</td>
<td>1.25</td>
<td>22nd</td>
<td>526.56</td>
</tr>
<tr>
<td>2008</td>
<td>5.28</td>
<td>51294</td>
<td>939.0</td>
<td>11.8</td>
<td>1.26</td>
<td>22nd</td>
<td>563.03</td>
</tr>
<tr>
<td>2009</td>
<td>5.17</td>
<td>54960</td>
<td>851.0</td>
<td>11.4</td>
<td>1.34</td>
<td>22nd</td>
<td>668.80</td>
</tr>
<tr>
<td>2010</td>
<td>5.78</td>
<td>64889</td>
<td>919.0</td>
<td>14.2</td>
<td>1.54</td>
<td>17th</td>
<td>747.70</td>
</tr>
<tr>
<td>2011</td>
<td>6.29</td>
<td>77591</td>
<td>n.a.</td>
<td>16.6</td>
<td>n.a.</td>
<td>n.a.</td>
<td>850.86</td>
</tr>
</tbody>
</table>

Average Annual Growth Rates (%)

<table>
<thead>
<tr>
<th>Period</th>
<th>Foreign Tourist Arrivals (in Million)</th>
<th>Foreign Exchange Earnings from Tourism (World (US$ Billion))</th>
<th>India's Share (%)</th>
<th>India's Rank</th>
<th>Visits to States and Union Territories (Domestic (in Million))</th>
<th>Foreign (in Million)</th>
<th>Out Bound Tourism (Million)</th>
</tr>
</thead>
</table>

Source: Government of India (2011a); * till 2010.

During 2003 to 2011, the FTAs grew at an average rate of 11.6 percent while FEE (in Indian Rs. crore) grew at 20.3 percent. During 1992 to 2002, they were growing at 4.4 and 14.6 percent respectively. The FTAs increased continuously from 2.38 million in 2002 to 6.29 million in 2011. At the same period, FEE increased from Rs. 15064 crore to Rs. 77591 crore (Chart 2.1).
Domestic tourism also plays an important role in overall tourism development in the country. During 2002 to 2011, the number of domestic tourist visits increased from 269.6 million to 850.9 million, witnessing a growth of 13.7 percent in spite of various adverse factors during this period and the number of foreign tourists visiting Indian states and union territories increased from 5.16 million to 19.95 million, registering 16.6 percent growth per annum (Table 2.1).

Share of India in world international tourist arrivals increased from 0.39 percent in 1995 to 0.61 percent in 2010 (not shown). During the same period, the India’s share in world foreign exchange earnings from tourism increased from 0.64 percent to 1.54 percent. It is noticed from Table 2.1 that during 2002 to 2010 India’s FEE from tourism grew faster than World FEE from tourism and India’s rank improved from 37 to 17.

Nearly one third of international tourist arrivals (FTAs) in India (29.2 percent) are catered by USA and UK. Other major source markets for India include Bangladesh (7.5 percent), Sri Lanka (4.6 percent), Canada (4.2 percent), Germany (3.9 percent), France (3.9 percent), Malaysia (3.1 percent), Australia (2.9 percent) and Japan (2.9 percent).

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4 Respective shares of USA, Spain and France in 2010 were 11.26 percent, 5.71 percent and 5.04 percent (not shown).
5 In 2010, nearly 60 percent of FTAs in India were males and rest were female (Government of India, 2011b).
These eight countries cumulatively account for nearly 34 percent of FTAs in India (See Chart 2.2).

Chart 2.2: Foreign Tourist Arrivals in India by Countries (2010)

Chart 2.3 provides the percentage distribution of FTAs in India by age groups. Nearly 21 percent of FTAs in India are aged 35-44 years. Around 20 percent of FTAs aged 45-54 years. 17.4 percent of FTAs belong to 25-34 years category. Thus, nearly 60 percent of FTAs aged between 25 and 54 years.

Chart 2.3: FTAs in India by Age Group in 2010
An interesting feature of international tourism in India is that the foreign exchange earnings (FEE) per international tourist arrived in India is about US $ 2500. This is relatively high as compared to FEE per tourist in many competitors-China, Thailand, Malaysia, etc (Chart 2.4). Such a high spent in India may be due to more number of days spent by foreign tourists in India compared to other countries. The Survey conducted by the Ministry of Tourism, Government of India indicates that the foreign tourists to India spend in the range of 7-18 days in India per trip, the overall average being 16 days (Government of India, 2006).

**Chart 2.4: Foreign Exchange Earnings per Tourist (US $) in 2010**

Maharastra, Tamil Nadu and Delhi are the major destinations for foreigners visiting India. They account for nearly 55 percent of foreign visits. Uttar Pradesh (where Taj Mahal is located) ranks fourth in attracting foreigners and Rajasthan ranks fifth (Table 2.2).
Table 2.2: Top 10 States/UTs in Number of Foreign Tourist Visits in 2010

<table>
<thead>
<tr>
<th>Top 10 States</th>
<th>Foreign Visits (in lakh)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maharastra</td>
<td>5.1</td>
<td>28.5</td>
</tr>
<tr>
<td>Tamil Nadu</td>
<td>2.8</td>
<td>15.7</td>
</tr>
<tr>
<td>Delhi</td>
<td>1.9</td>
<td>10.6</td>
</tr>
<tr>
<td>Uttar Pradesh</td>
<td>1.7</td>
<td>9.4</td>
</tr>
<tr>
<td>Rajasthan</td>
<td>1.3</td>
<td>7.2</td>
</tr>
<tr>
<td>West Begal</td>
<td>1.2</td>
<td>6.7</td>
</tr>
<tr>
<td>Kerala</td>
<td>0.7</td>
<td>3.7</td>
</tr>
<tr>
<td>Bihar</td>
<td>0.6</td>
<td>3.6</td>
</tr>
<tr>
<td>Himachal Pradesh</td>
<td>0.5</td>
<td>2.5</td>
</tr>
<tr>
<td>Goa</td>
<td>0.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Total: Top 10 states</td>
<td>16.1</td>
<td>90.3</td>
</tr>
<tr>
<td>Others</td>
<td>1.7</td>
<td>9.7</td>
</tr>
<tr>
<td>Total</td>
<td>17.9</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Tourism Promotion in India

The new National Tourism Policy (Government of India, 2002), the Eleventh Five Year Plan (Planning Commission, 2008) and the Draft Approach to the 12th Fiver Year (Planning Commission, 2011) reports highlight the importance of tourism sector in terms of its contribution to GDP and employment generation and proposed to focus on creation of adequate tourism infrastructure like modernization and expansion of airports, better hotel accommodation facilities, and improved road connectivity to tourist destinations. Many action plans and strategies were proposed. Government has also taken various steps to promote tourism in India.

The major steps are: (i) 23 mega projects were sanctioned to develop quality tourism infrastructure at tourist destinations in India; (ii) Government has adopted “Code of Conduct” for “Safe and Honorable Tourism on July 2010; (iii) Along with Incredible India Campaign, Visa-on Arrival scheme was introduced for tourists from Singapore, Finland,, New Zealand, Luxembourg, and Japan on a pilot basis from January 2010 and was extended to many other nations in 2011; and (iv) Government promotes community tourism, heritage tourism, eco tourism, medical tourism, wellness tourism and the like. Despite all these efforts, the share of India in World tourism receipts is still low at 1.54 percent.

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6 The following types of (niche) tourism offered in India: Adventure tourism, sun sand coastal tourism, black water tourism, eco tourism, architectural treasurers, hill delights, forts and palaces, the deserts, the jungle, island attractions, pilgrimage, northeastern regions, medical/healthcare tourism and travel tourism.
Chapter 3
MEDICAL TOURISM IN INDIA: PROGRESS, OPPORTUNITIES AND CHALLENGES

Medical Tourism: Progress
India’s effort to promote medical tourism took off in the late 2002 when McKinsey-CII (2002) study outlined immense potential of this sector. In the same year, the Ministry of Tourism started “Incredible India” - the government’s big budget market campaign to attract tourists. In the following year, the then Finance Minister Jaswant Singh called for the country to become a “global health destination” and urged for improving airport infrastructure to smooth the arrival and the departure of medical tourists.

Efforts were made to modernize and expand airports in the country, and to improve road connectivity and other infrastructure facilities. The Government of India promoted 45 private hospitals as Centre of Excellence in its tourism brochure. It introduced a new M or medical visa for medical tourists and their companions too. The Ministry of Health and Family Welfare has set up a National Accreditation Board for hospitals. The government declared medical tourism as services export so that this sector avails tax concessions.

At the state level, some state governments participate in healthcare tourism expos abroad. Kerala has made concerted efforts to promote healthcare tourism, leveraging Ayurveda. Karantaka is setting up Bangalore International Health City Corporation. Maharastra has granted the industry status to the tourism activity such that this sector gets all benefits/incentives given to all other industries. Gujarath announced a separate policy for medical tourism.

The industry has also made various initiatives. Healthcare centers have established world class infrastructure to attract international patients. They set up comprehensive diagnostic centres, imaging centres, and world class blood banks. Hospitals are constantly upgrading technology. Some hospitals have established special wards for international patients. Some are tying up with travel/tour operators to offer healthcare tourism as a single service package. Few hospitals are in the process of continuous innovation of products, services and facilities to give better value to the customers. While doing so, some hospitals are focusing on cost effective-customer oriented technology. Many healthcare centers are increasingly participating in international trade fairs/exhibitions to promote medical tourism. The medical tourism in
India has also gained a boost with an increase in investments and FDI from international players.

Indian healthcare institutions are increasingly going for international accreditation of hospitals and clinical laboratories. Currently, there are 16 JCI approved hospitals in India. They are: (1) Ahalia Foundation Eye hospital, Palakkad (Kerala), (2) Apollo Gleneagle hospitals (Kolkata), (3) Apollo hospitals (Bangalore), (4) Apollo hospitals (Chennai), (5) Apollo hospitals (Hyderabad), (6) Asian heart Institute (Mumbai), (7) Fortis Escorts heart hospitals (New Delhi), (8) Fortis Hospitals (Mohali), (9) Fortis Hospitals (Bangalore), (10) Fortis hospitals (Mumbai), (11) Indraprastha Apollo Hospital (New Delhi) (12) Moolchand Hospitals, (New Delhi), (13) Narayan Hrudayalaya (Bangalore), (14) Satguru Partp Singh Apollo Hospitals (Punjab), (15) Shroff Eye hospital (Mumbai), and (16) Sri Ramachandra Medical Centre (Chennai). Among the selective countries shown in Chart 3.1, India ranks second in number of JCI hospitals, next only to Thailand.

<table>
<thead>
<tr>
<th>Selective Countries</th>
<th>Number of JCI Hospitals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thailand</td>
<td>18</td>
</tr>
<tr>
<td>India</td>
<td>16</td>
</tr>
<tr>
<td>China</td>
<td>15</td>
</tr>
<tr>
<td>Singapore</td>
<td>14</td>
</tr>
<tr>
<td>South Korea</td>
<td>12</td>
</tr>
<tr>
<td>Malaysia</td>
<td>7</td>
</tr>
<tr>
<td>Spain</td>
<td>7</td>
</tr>
<tr>
<td>Indonesia</td>
<td>5</td>
</tr>
<tr>
<td>Germany</td>
<td>4</td>
</tr>
<tr>
<td>Philippines</td>
<td>4</td>
</tr>
<tr>
<td>Costa Rica</td>
<td>3</td>
</tr>
<tr>
<td>Japan</td>
<td>2</td>
</tr>
<tr>
<td>Bangladesh</td>
<td>1</td>
</tr>
<tr>
<td>Pakistan</td>
<td>1</td>
</tr>
<tr>
<td>Belgium</td>
<td>1</td>
</tr>
</tbody>
</table>

There are 63 NABH (National Accreditation Board for Hospitals) approved hospitals in India and 395 hospitals have also applied for NABA accreditation. Majority of population speak English. Most of doctors and medical staff have world class exposure and fluency in English. While India has some of the best (world class) medical procedures, it offers a whole lot of natural solutions to health-Ayurveda, Sidha, Unani,

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7 Source: India http://www.jointcommissioninternational.org/JCI-Accredited-Organizations/
8 Language being one of the major barriers in other countries gives India a competitive edge over those nations.
Yoga, Acupuncture, Homeopathy, Naturopathy, Aroma therapy, Herbal Oil massage, etc. India offers significant savings to the foreign patients. For almost all treatments, India has cost advantages. Its price is the lowest among any nation in the world (see Table 3.1).

<table>
<thead>
<tr>
<th>Procedures</th>
<th>USA</th>
<th>India</th>
<th>Thailand</th>
<th>Singapore</th>
<th>Malaysia</th>
<th>South Korea</th>
<th>Mexico</th>
<th>Costa Rica</th>
<th>UAE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart Bypass</td>
<td>13300</td>
<td>7000</td>
<td>22000</td>
<td>16300</td>
<td>12000</td>
<td>31700</td>
<td>27000</td>
<td>24100</td>
<td>40900</td>
</tr>
<tr>
<td>Heart valve replacement</td>
<td>140000</td>
<td>9500</td>
<td>25000</td>
<td>22000</td>
<td>13400</td>
<td>42000</td>
<td>30000</td>
<td>30000</td>
<td>50600</td>
</tr>
<tr>
<td>Hip Replacement</td>
<td>57000</td>
<td>7020</td>
<td>12700</td>
<td>1200</td>
<td>7500</td>
<td>10600</td>
<td>13900</td>
<td>11400</td>
<td>46000</td>
</tr>
<tr>
<td>Knee Replacement</td>
<td>53000</td>
<td>9200</td>
<td>11500</td>
<td>9600</td>
<td>12000</td>
<td>11800</td>
<td>14900</td>
<td>10700</td>
<td>40200</td>
</tr>
<tr>
<td>Face Lift</td>
<td>16000</td>
<td>4800</td>
<td>5000</td>
<td>7500</td>
<td>6400</td>
<td>6600</td>
<td>11300</td>
<td>4900</td>
<td>n/a</td>
</tr>
<tr>
<td>Lap. Gastric Bypass</td>
<td>52000</td>
<td>9300</td>
<td>13000</td>
<td>16500</td>
<td>12700</td>
<td>9300</td>
<td>11000</td>
<td>n/a</td>
<td>n/a</td>
</tr>
</tbody>
</table>

Hotels are the most visible and important parts of a country's infrastructure. This industry is closely linked with (medical) tourism industry. Hotel industry is growing rapidly in India in recent years. In 2003, there were 1722 hotels in India. They increased to 2483 in 2010 (Table 3.2). During this period, while number of rooms in one-star hotels declined by about 62 percent, number of rooms in 5-star hotels increased by about 103 percent.
Table 3.2: Approved Hotels and Rooms: 2003 and 2010

<table>
<thead>
<tr>
<th>Category of Hotels</th>
<th>No. of Hotels</th>
<th>No. of Rooms</th>
<th>% Change</th>
<th>No. of Hotels</th>
<th>No. of Rooms</th>
<th>% change</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2003</td>
<td>2010</td>
<td></td>
<td>2003</td>
<td>2010</td>
<td></td>
</tr>
<tr>
<td>One Star</td>
<td>201</td>
<td>67</td>
<td>-66.7</td>
<td>6606</td>
<td>2537</td>
<td>-61.6</td>
</tr>
<tr>
<td>Two Star</td>
<td>533</td>
<td>307</td>
<td>-42.4</td>
<td>17629</td>
<td>8446</td>
<td>-52.1</td>
</tr>
<tr>
<td>Three star</td>
<td>551</td>
<td>869</td>
<td>57.7</td>
<td>26071</td>
<td>36585</td>
<td>40.3</td>
</tr>
<tr>
<td>Four Star</td>
<td>122</td>
<td>157</td>
<td>28.7</td>
<td>8655</td>
<td>12059</td>
<td>39.3</td>
</tr>
<tr>
<td>Five Star</td>
<td>85</td>
<td>149</td>
<td>75.3</td>
<td>10416</td>
<td>17144</td>
<td>64.6</td>
</tr>
<tr>
<td>Five Star Deluxe</td>
<td>74</td>
<td>153</td>
<td>106.8</td>
<td>16885</td>
<td>34187</td>
<td>102.5</td>
</tr>
<tr>
<td>Apartment</td>
<td>-</td>
<td>8</td>
<td></td>
<td>756</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time Share Resorts</td>
<td>-</td>
<td>1</td>
<td></td>
<td>62</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Heritage Hotels</td>
<td>77</td>
<td>146</td>
<td>89.6</td>
<td>2124</td>
<td>3879</td>
<td>82.6</td>
</tr>
<tr>
<td>Silver Bed &amp; Breakfast Establishments</td>
<td>469</td>
<td>1540</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Guest House</td>
<td>79</td>
<td>156</td>
<td>97.5</td>
<td>3334</td>
<td>580</td>
<td>-82.6</td>
</tr>
<tr>
<td>Unclassified</td>
<td>79</td>
<td>156</td>
<td>97.5</td>
<td>3334</td>
<td>580</td>
<td>-82.6</td>
</tr>
<tr>
<td>Total</td>
<td>1722</td>
<td>2483</td>
<td>44.2</td>
<td>91720</td>
<td>117815</td>
<td>28.5</td>
</tr>
</tbody>
</table>

Further the number of recognized tour operators increased in many states in India over the years. Chart 3.2 shows the number of recognized tour operators in major Indian states and union territories (UTs) in India as on December 2010. Delhi, Maharastra and Tamil Nadu are the top three states and union territories in number of recognized tour operators.

Availability of high quality healthcare professionals and nurses, round the clock services by medical staff, choice of luxury rooms in hospitals, good medical options, high success rates, reputation for treatment in advanced healthcare segment such as cardio vascular surgery, organ transplants, and eye surgery, popularity of Indian traditional wellness systems, diversity of tourist destinations, strength in information technology are the attractive aspects of Indian medical tourism. Today more and more foreigners choose India as their destination for the treatment because of its rich cultural heritage and innumerable tourist attractions. The medical tourism is a growing source of foreign exchange as well as prestige and goodwill outside the country. This sector is an example of how India is profiting from globalization and outsourcing.
FTAs For Medical Treatment
Chart 3.3 depicts the proportion of FTAs by the purpose of visit. Nearly 28 percent of FTAs in India visited friends and relatives; 24 percent visited for recreation and leisure; and 18.6 percent came for business and professional activity. Only 2.7 percent of FTAs in 2010 were medical tourists. That is, of the total FTAs in India of 5.78 million, only 1.56 lakh visited for medical treatments in India in 2010.

Chart 3.3: Proportion of FTAs in India by Purpose of Visit (2010)

Source: Government of India (2011b).
Of the 1.56 lakh FTAs who visited India for medical treatments in 2010, 36694 FTAs were from Maldives (i.e., 23.5 percent) and 35853 were from Bangladesh (23 percent). Thus, nearly 50 percent of FTAs in India who visited for medical treatment purpose were from these two countries. India also hosts medical tourists from USA, UK, Canada and Germany (Chart 3.4).

**Chart 3.4: FTAs in India for Medical Treatment (2010)**

According a research project commissioned by the Government of India to Indian Institute of Tourism and Travel Management, cardiac treatment (30 percent) is the most popular procedure in Indian medical tourism, followed by orthopedic including joint replacement (15 percent), nephrology (12 percent), Nero-surgery (11 percent), cancer (11 percent) and all others including cosmetic surgery (22 percent).

**Medical Tourists and Revenues**
Since the data on the exact number of medical tourist arrivals and revenues are not readily available, we project/estimate the number of medical tourists and earnings from them till 2015. According to the data compiled by the Ministry of tourism from major airports, 0.16 million are medical tourists in India (in 2010). The International Passenger Survey (2003) conducted by the Ministry of tourism estimated that 10 percent of about 2 million non resident Indians (NRIs) who visited India got medical treatments in India (Goutam, 2008). The same share if extrapolated for the year 2010 would give an
estimated number of 0.3 million NRIs visiting India to undergo various medical
treatments (Table 3.3).

Table 3.3: Number of Medical Tourists in India and Revenues in 2010

<table>
<thead>
<tr>
<th>Details</th>
<th>Persons (million)</th>
<th>Avg. Expenditure (US$)</th>
<th>Foreign Exchange Earnings (US $ million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I. Foreign Tourist Arrivals (FTAs)</td>
<td>5.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>II. Medical Tourists (2.7% of FTAs)</td>
<td>0.16</td>
<td>2500</td>
<td>400</td>
</tr>
<tr>
<td>III. Number of NRI Visitors</td>
<td>3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IV. 10% of NRIs with HC objectives</td>
<td>0.3</td>
<td>1500</td>
<td>450</td>
</tr>
<tr>
<td>V. 5% of FTAs using wellness system</td>
<td>0.29</td>
<td>750</td>
<td>217.5</td>
</tr>
<tr>
<td>Total Number of Medical Tourists (II+IV+V)</td>
<td>0.75</td>
<td></td>
<td>1067.5</td>
</tr>
</tbody>
</table>

Further, there are a large number of international visitors including NRIs who
come for other purposes, but use wellness systems such as Yoga, Ayurveda and Sidha. If
we assume that 5 percent of FTAs use such wellness systems in India, the estimated
number of medical tourists under this category would be 0.29 million. These three
categories of tourists add up to 0.75 million (in 2010).

Using the average spending by FTAs in India of US $ 2500 per person, the
estimated total spending incurred by FTAs visiting for medical purpose works out to be
US $ 400 million. Assuming that NRIs spend US $ 1500 per person for medical treatment
in India (60 percent of what FTAs spent) and FTAs using wellness system in India on an
average spend US $ 750, the estimated total spending by these categories of medical
tourists work out to be US $ 450 million and US $ 217.5 million respectively. Putting
together, the medical tourism industry in India generated a revenue of US $ 1067.5
million (approximately Rs. 6000 crore) in 2010 (Table 3.3).

In Table 3.4, we have given the projected number of medical tourists in India
and revenues from them up to 2015. Scenario (pessimistic) 1 assumes 10 percent growth
due to global slow down in recent years, while Scenario 2 assumes 20 percent growth
(consistent with past 9 years growth) and Scenario 3 (optimistic) assumes 30 percent
growth. The estimated number of medial tourists in India in 2015 would be between
1.21 million and 2.78 million. The estimated revenue would lie between US $ 1719 million
to US $ 3964 million in 2015.
Table 3.4: Medical Tourists and Revenues up to 2015 in India: Projected

<table>
<thead>
<tr>
<th>Details</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Scenario 1 (10 Percent Growth)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Tourists (million)</td>
<td>0.75</td>
<td>0.83</td>
<td>0.91</td>
<td>1.00</td>
<td>1.10</td>
<td>1.21</td>
</tr>
<tr>
<td>Revenues (US $ million)</td>
<td>1067.5</td>
<td>1174.3</td>
<td>1291.7</td>
<td>1420.8</td>
<td>1562.9</td>
<td>1719.2</td>
</tr>
<tr>
<td><strong>Scenario 2 (20 Percent Growth)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Tourists (million)</td>
<td>0.75</td>
<td>0.90</td>
<td>1.08</td>
<td>1.30</td>
<td>1.56</td>
<td>1.87</td>
</tr>
<tr>
<td>Revenues (US $ million)</td>
<td>1067.5</td>
<td>1281.0</td>
<td>1537.2</td>
<td>1844.6</td>
<td>2213.6</td>
<td>2656.3</td>
</tr>
<tr>
<td><strong>Scenario 3 (30 Percent Growth)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medical Tourists (million)</td>
<td>0.75</td>
<td>0.98</td>
<td>1.27</td>
<td>1.65</td>
<td>2.14</td>
<td>2.78</td>
</tr>
<tr>
<td>Revenues (US $ million)</td>
<td>1067.5</td>
<td>1387.8</td>
<td>1804.1</td>
<td>2345.3</td>
<td>3048.9</td>
<td>3963.6</td>
</tr>
</tbody>
</table>

**Medical Tourism: Opportunities**

India has many advantages. The first and the foremost is cost advantage. Then, it has many hospitals equipped with international standards. Most of Indian doctors and other medical staff have world class exposure and are fluent in English which is connecting language globally. India also has a whole lot of natural solutions to health like Ayurveda, and Sidha. It has many exotic tourist spots. Many medical tourists have already chosen India as their destination for treatments. They to some extent help the country to promote itself as a business and tourism destination. India should use these opportunities and make more efforts to advertise these advantages and attract more medical tourists.

India is one of the fast growing nations in the world. Perceived as a service hub across the globe, India has attracted a large number of global companies to set up their base in India. This has already resulted in increased flow of business travel. The medical tourism industry should take this opportunity to attract medical tourists and popularize wellness system in the country such that more and more FTAs could use them.

Doctors in western part of the world are increasingly prescribing Indian system of natural healing and medicine to their patients. This will make many foreign patients to choose India for treatments. In olden days, people used to travel to USA to get advanced medical treatment. Now the reverse is happening. IT boom and cheaper flights make people to choose alternate health destinations for treatment.

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9 For instance, Ayurveda is now an official healthcare treatment in Hungary.
Fast paced life style increases demand for wellness tourism and alternative cures.\textsuperscript{10} Health insurance in country like USA covers only critical care and not cosmetic care and beauty treatments. For those who seek cosmetic/beauty treatments choose low cost destinations like India.

Soaring medical costs, high insurance premiums, long waiting lists, large number of uninsured/under insured and insured in many advance nations force people in those nations to be medical tourists. Insurance companies and employers also prefer to send patients to India in order to reduce health care expenses. Large Indian community living abroad also makes use of significant part of medical tourism in India.

In Japan, USA, UK and many other European nations, the proportion of elder people has increased rapidly. At the same time, life expectancy has also increased steadily. The combined result is: significant demand for natural healthcare system. Inability of many healthcare systems drives many individuals to seek alternative to domestic healthcare. Demand from countries with underdeveloped healthcare capacities also increases.

The main opportunity presented by medical tourism is its contribution to the growth of health economies. It is a major source for foreign exchange and stimulates economic growth in other sectors including tourism, transport, pharmaceuticals, hotels, food suppliers to hospitals and restaurants. The labor intensive nature of the tourism industry makes it an excellent generator of employment. Medical tourism and the competition on the global health market promote technological advances and improved medical infrastructure.

It may stem brain drain. NRIs may return as they find medical sector in India more lucrative than before. Modern hospitals that make significant investment in facilities and staff, in part to compete for international patients, now also provide the benefits and working conditions to satisfy the aspirations of medical professionals who would otherwise move outside the country (UNESCAP, 2007). Greater competition from private sector may force changes in public sector health systems in the country.

\textsuperscript{10} Now people like to get away from the daily hustle of life and get a quick treatment at an affordable price followed by a great vacation at some of the most beautiful location.
Medical Tourism in India: Challenges and Issues

The challenges facing Indian medical tourism industry are as follows:

i. No strong Government support/initiative to promote medical tourism.
ii. Lack of coordination among various players in the industry-airline operators, hotels and hospitals.
iii. The negative perceptions about India with regard to public sanitation/ hygiene standards or prevalence of contagious diseases.
iv. No proper accreditation and regulation system for hospitals.
v. Lack of uniform pricing policy across hospitals.
vi. Strong competitions from many other players.
vii. Lack of insurance policies for this sector.
viii. Low investments in health infrastructure.
ix. Growth generates healthcare challenges in booming India. The country graduates 27,000 doctors each year but most want to work in cities. But millions must walk miles to see a physician.
x. Inequalities in healthcare access between private and public systems may increase
xi. This may induce domestic brain drain from public to private sector.
xii. Indian Government’s campaign to make India a primary medical tourism destination may divert attention from primary healthcare and other sectors.
xiii. Availability of hotel rooms in India is considered to be more difficult as compared to other countries. In addition, the cost of accommodation is another hindrance to middle-level international travelers visiting India.
xiv. Public-Private Partnership is required to provide quality services to attract potential healthcare seekers from various countries.
Chapter 4

ECONOMICS OF MEDICAL TOURISM: GAIN FROM TRADE

In this chapter, we adopt Ricardo’s (1817) model of comparative advantage to the cost of medical surgeries to demonstrate how specialization and free trade between two nations-India and South Korea result in gains from medical tourism trade. This model is based on the following assumptions:

(i) There are only two countries;
(ii) There are only two kinds of medical services - bypass surgery and hip replacement. These services are homogenous in quality;
(iii) No economies of scale and no transportation cost;
(iv) No barriers to trade; and
(v) Perfect knowledge exists.

Table 4.1 shows the cost of production for bypass surgery and hip replacement in India and South Korea. India has absolute advantage in both services, in terms of low cost of production. Based on (approximate) number of hospitals or capacity in each country, Table 4.1 also shows the maximum production capacities in medical treatments per hospital per day for sample nations. India can perform a maximum of 10 bypass surgeries or zero hip replacement surgery or 10 hip replacement surgeries and zero bypass surgery. South Korea, given its capacity can produce either 2 bypass surgery or 6 hip replacement surgery.

Table 4.1: Unit Costs of Bypass and Hip Replacement, and Outputs in Autarky in India and South Korea

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Unit Cost (US $)</th>
<th>Maximum Output</th>
<th>Autarky</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>India</td>
<td>South Korea</td>
<td>India</td>
</tr>
<tr>
<td>Capacity</td>
<td>70000</td>
<td>66000</td>
<td></td>
</tr>
<tr>
<td>By pass</td>
<td>7000</td>
<td>30000</td>
<td>10</td>
</tr>
<tr>
<td>Hip Replacement</td>
<td>7020</td>
<td>10500</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td>20</td>
<td>8</td>
<td>10</td>
</tr>
</tbody>
</table>

We assume that production possibility frontiers are constant (i.e., opportunity costs are constant). In the case of Autarky (i.e., absence of trade situation), India gives

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11 This section is primarily based on Piazolo and Zanca (2011).
up -1 unit of hip replacement for an additional unit of bypass surgery. This trade-off is opportunity cost of bypass surgery in India. The opportunity cost of bypass surgery in South Korea is -0.35. The opportunity costs of hip replacement in respective countries are 1 and 3. In autarky, if we assume that each country divides its production capacity equally between bypass and hip replacement, India can perform 5 bypass surgeries and 5 hip replacement surgeries and South Korea can perform 1 bypass and 3 hip replacement services.

Table 4.2 demonstrates how both countries gain from free trade and specialization. If we allow for medical tourism flow between India and South Korea, the point of production moves towards the level of services at which each country has a comparative advantage. India has absolute advantage in both services. But South Korea has a comparative advantage in hip replacement (its opportunity cost is 3). Therefore, under free trade, South Korea can fully specialize in production of hip replacement, while India can shift its production slightly towards bypass surgery. Due to vast differences in opportunity costs, the full specialization is not feasible for India.

**Table 4.2: Economics of Medical Tourism: Gains From Trade and Specialization**

<table>
<thead>
<tr>
<th>Details</th>
<th>India</th>
<th>South Korea</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bypass</td>
<td>Hip Replacement</td>
<td>Bypass</td>
</tr>
<tr>
<td>Production</td>
<td>7</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Trade</td>
<td>Give 2</td>
<td>Get 3</td>
<td>Get 2</td>
</tr>
<tr>
<td>Consumption</td>
<td>5</td>
<td>6</td>
<td>2</td>
</tr>
</tbody>
</table>

As a result of comparative advantage and international trade, the aggregate production increases from 14 to 16. Indian hospitals can perform 7 bypass surgeries and 3 hip replacement surgeries while hospitals in South Korea can perform only 6 hip replacements. Two South Korean medical tourists can go to India for bypass surgery while three Indian medical tourists can fly to South Korea for hip replacement. Consumers in both countries are strictly better off under free trade than under autarky. Under the autarky and given resources, 10 Indian patients and 4 South Korean patients are treated. But under free trade arrangement, 11 India patents and 5 South Korean patients are treated. The total gain from trade and specialization in this case is 2.
Chapter 5

CONCLUDING REMARKS

The medical tourism is an outsourcing medical services primarily expensive surgery to low cost countries. It offers financial value for growing burden of the costs in matured markets like USA. It also provides an alternative for millions of uninsured people to receive affordable and accessible medical services from developing countries.

India is an important player in this industry as it has many advantages. Its cost is the lowest in the world. It has many internationally accredited hospitals. Most of its doctors and medical staff have world class exposure and fluency in English. In addition, it is rich in cultural heritage and has innumerable tourist attractions. It also offers a wide variety of alternative medicines. In 2010, there were 7,50,000 medical tourists in India. The foreign exchange earning from this sector was around US $ 1068 million.

This sector is expected to grow exponentially due to external as well as internal factors. The external forces are: soaring medical costs, high insurance premiums, long waiting lists, large number of uninsured/under insured and insured in many advance nations. The internal factors are: availability of high quality medical professionals and medical staff, large number of world class hospitals and infrastructure, government promotion, tax concession etc. Estimates indicate that the number of medical tourists in India will increase to 2.8 million and the exchange earnings will rise to US $ 3964 million in 2015.

Lack of regulation in the healthcare system, lack of coordination among various players in the industry (airline operators, hotels and hospitals), unethical profession behavior, competitions from many other players, low investments in health infrastructure, increasing inequalities in healthcare access between private and public systems, and domestic brain drain from public to private sector are the major challenges facing this sector.
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