

**Towards BIMSTEC-Japan Economic Cooperation:  
The Case of IT Industry and General Agreement on Trade in Services**

**Sajikumar. S**

**CSIRD Discussion Paper: 6/2005**

**November 2005**



**Centre for Studies in International Relations and Development (CSIRD)**

167-B, S. P. Mukherjee Road, Kolkata 700026, India

Phone: (9133) 24630884, 22483769, Fax: (9133) 22483769

Email: [csirdindia@yahoo.co.in](mailto:csirdindia@yahoo.co.in), Website: [www.csird.org.in](http://www.csird.org.in)

*CSIRD Discussion Papers intend to disseminate preliminary findings of the research carried out at the institute to attract comments. The feedback and comments may be directed to the author(s). CSIRD Discussion Papers are available at [www.csird.org.in](http://www.csird.org.in)*

# **Towards BIMSTEC-Japan Economic Cooperation: The Case of IT Industry and General Agreement on Trade in Services**

**Sajikumar. S\***

## **Abstract**

*This paper stresses the need for cooperation among BIMSTEC countries and Japan in Information and Communication Technology industries and in the General Agreement on Trade in Services. Among BIMSTEC members, India has globally acclaimed IT industry and has immense potential as a service provider to the IT world. Japan, at the same time, has well developed computer hardware industry and high-end technology but face acute shortage of skilled professionals. Like these, there are a number of complementarities between both countries. If we are effectively tapping these demand and supply forces both countries can progress in this field more. In addition, this regional cooperation can reduce excessive dependence on the EU and US. Bilateral discussions and WTO negotiations related to GATS show some positive signs of cooperation.*

## **1. Introduction**

The aim of this paper is to provide some insights on the significance of cooperation among BIMSTEC (Bay of Bengal Initiatives for Multi-Sectoral Technical and Economic Cooperation) countries and Japan in Information and Communication Technology (ICT) industries and WTO negotiations of General Agreements on Trade in Services (GATS). Among BIMSTEC members, India has received global acclaim for her unprecedented performance in Information Technology (IT) and IT-enabled Services (ITES), especially after the mid nineties (WTO 2004a). Indian software and BPO industries are among the fastest growing industries of the world both in terms of export earning and employment generation (NASSOM website). Japan being the representative of developed world is known for its well-developed hardware industry. Moreover, the Japanese software industry is remarkable in terms of quality even though the industry faces shortage of skilled professionals (FICCI 2004). At the same time, India has a reserve pool of highly skilled professionals in IT industry. This indicates the necessity of bilateral cooperation in the industry between India and Japan. Being members of WTO, both Japan and India have concerns over the GATS, which also includes IT and ITES. In 2005, both the countries have submitted revised GATS offers before Council of Trade in Services (CTS) of WTO. The Revised Offers cover more opening up and bilateral relations, particularly in emerging service sectors like Information and Communication Technology. Even though India and Japan have different views and opinions regarding GATS negotiations, in view of forthcoming Hong Kong Ministerial Meeting of WTO (December 2005), efforts have been made by both the countries to narrow down such differences.

This paper has two objectives. First is to understand the growth, significance and sustainability of IT industry in India and Japan, and the need for cooperation in the sector. Second is to discuss the negotiation status in GATS, especially on IT and ITES sectors, between India and Japan, and to draw some policy recommendations for the forthcoming WTO negotiations.

---

\* The author is a research fellow in VV Giri National Labour institute as a part of 'Young Researchers' Fellowship Programme 2005-06. Email. sajisundhar@gmail.com. Author is thankful for useful discussions with Babu.P.Remesh and Neetha N, and gratefully acknowledges comments and suggestions provided by Prabir De and anonymous referees.

## 2. IT industry in India and Japan

According to International Trade Statistics (WTO 2004b), international trade in services has grown much faster after 1980s. Trade in services has received new meanings and dimensions in recent years with growing acceptance of IT-based global delivery model, offshoring of services. With ever increasing availability in international bandwidth and powerful workflow management software, it is now possible to disaggregate any business process, execute the sub-processes in multiple centres around the world, and reassemble it, in near-real time, at another location (Government of India 2004).

Information and Communication revolution and favourable government policies in connection with WTO agreements made easy the offshoring of service works in faraway locations (Sajikumar.S 2005). Recent trends in trade in services show the tremendous increase in production and exports of other commercial services. In 1992, world exports of commercial services were US\$ 924.20 billion. It rose to US\$ 1274.70 billion in 1996, and reached US\$ 1570.10 billion in 2002 (WTO 2004b)\*. The decomposition of trade in services data shows the significant growth of IT and ITES, which fall under 'Other Commercial Services'<sup>†</sup> (see Table 1).

**Table 1: World Exports of Commercial Services by Category**

Categories	1990	1995	2002
Transportation	28.54	25.21	22.33
Travel	33.84	33.70	30.63
Other commercial services	37.61	41.09	47.04

Source: WTO, International Trade Statistics, 2004

Spectacular growth of IT and ITES sectors is remarkable in countries like India and Japan. Taking the advantage of favourable global trends and strong support by respective governments and dynamic entrepreneurial class, IT industry recorded spectacular growth in recent years. IT industry being one of the world's largest industries accounts 22 percent of developing countries exports (UNCTAD 2002).

In 1993, India's export of commercial services was only 2.8 percent of total exports and had a share of 0.53 percent in global services export, which became 19.57 percent of India's exports and 0.67 per cent of global services exports in 1997. The rise of India's IT industry is phenomenal; her share in world services exports went up to 1.5 percent in 2004. Destinations of India's services exports are mainly the US and EU.

According to World Development Indicators 2005, Japan's export of services increased from US\$ 63.67 billion in 2001 to US\$ 75.93 billion in 2003. During this time, imports of services also hiked to US\$ 110.25 billion from US\$ 107.03 billion. But trade in services as share of total trade has decelerated slightly from 19.63 percent in 2001 to 18.98 percent in 2003 (World Bank 2005). Of course, this is not a significant change, but the service industry plays a crucial role in Japan's international trade and also in domestic economy. Japan's major trading partners in trade in services related to IT and ITES are EU and the US.

\* International Trade statistics of services is still incomplete and unmeasured due to its inherent nature. Due to frequent revisions to the services data, there are numerous breaks in the continuity of the data series at the country and regional levels. See the Technical Notes given in WTO international Trade statistics ([www.wto.org](http://www.wto.org))

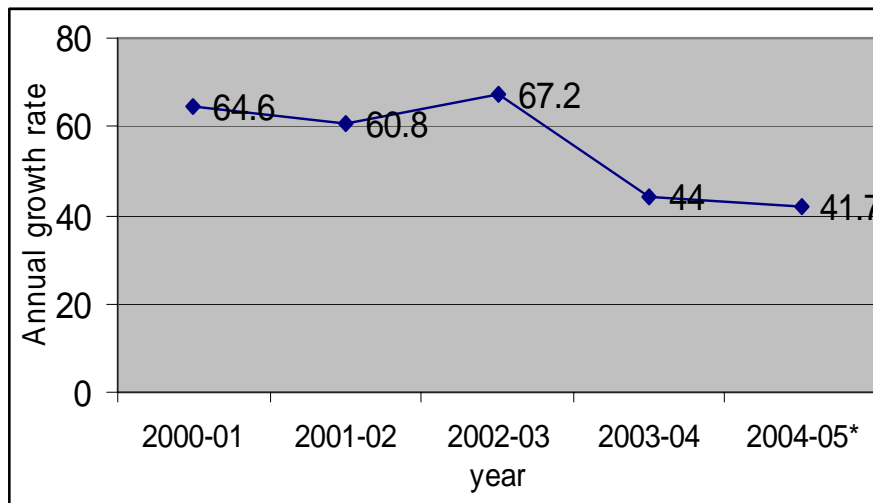
<sup>†</sup> According to WTO trade classification total services are classified into three groups such as Transport, Travel and Other Commercial Services, where IT and ITES come under Other Commercial Services.

## 2.1 Indian IT Industry

India's new service sector has been dominated by IT and ITES. Indian software and services exports is estimated at US\$ 172 billion in 2004-05, as compared to US\$ 13 billion in 2003-04, witnessed an increase of 34 percent between the years. Export revenue from ITES-BPO grew from US\$ 2.5 billion in 2002-03 to US\$ 3.6 billion in 2003-04, achieved a growth of 44 percent. In 2003-04, ITES-BPO exports accounted for over 27 percent of the total export revenue earned by the Indian IT-ITES industry. The value of ITES-BPO exports from India is expected to exceed US\$ 5 billion in the year 2004-05 (Government of India 2004).

Although the export earning is still increasing, growth rate of the industry is slowing down (see Figure 1), which shows the maturity of Indian ITES-BPO sector. This maturity and consolidation is a result of numerous mergers and acquisitions taken place within the sector. There are over 400 companies operating in the Indian ITES-BPO space, including captive units (of both MNCs and Indian companies) and third-party services providers. Players in the Indian ITES-BPO industry are broadly classified into captive units and independent third-party services providers. Captive units continue to dominate the segment, accounting for over 65 percent of the value of work off-shored to the country. While the independent /third-party ITES-BPO vendors outnumber the captive units, the scale of work undertaken by each unit in the latter category is significantly higher.

**Figure 1: Growth of Indian ITES-BPO Exports: 2000 to 2005 (in percent)**



Source: NASSCOM

The domestic market for ITES-BPO also witnessed a significant increase in demand with the estimated value of work outsourced (by domestic clients) rising from US\$ 100 million in 2000-01 to US\$ 600 million 2004-05. In addition, India has a very small Internet connectivity and user population of seven million, which is very low compared to Japan.

India's key advantages in the global IT and ITES-BPO industry is the availability of an abundant, high quality and cost-effective pool of skilled knowledge workers. The industry employs more than 8 lakh professionals with around 2.6 lakhs in software exports; 28,000 in the domestic software market; 2.80 lakhs in captive software user organizations, and 2.45 lakhs in the ITES-BPO sector (see Table 2). The Indian ICT workforce is defined by the following characteristics –the overall median age of the software professionals is about 27.5 years. 81 percent of all software professionals have a graduate degree or above. Out of total workers, 13 percent are M.Tech, MBA, CA, ICWAs, 67 percent are B.Tech, BE or MCAs and remaining 20 percent are diploma-holders or graduates (NASSCOM).

**Table 2: Workforce in Indian ICT industry**

<i>Professionals in the ICT industry</i>	<i>2001-02</i>	<i>2002-03</i>	<i>2003-04</i>
Software Exports sector	170,000	205,000	260,000
Software-domestic sector	22,000	25,000	28,000
Software-captive in user organizations	224,250	260,000	280,000
ITES-BPO	106,000	171,000	245,000
Total	522,250	661,000	813,000

Source: NASSCOM website

In India, every year millions of Graduates from IITs and other institutes of high standards are entering labour market. In Silicon Valley and other major IT destinations of the world, the share of Indian professionals is relatively high. In addition, most of the developed countries including EU and US consider India as a reserve pool of skilled professionals for their ICT industry. India also earns billions of dollars every year from export of IT and ITES.

## 2.2 Japanese IT Industry

The Japanese software industry is a paradox, highly productive and yet unsuccessful industry (Barr and Tessler 1995). What does this contrast suggest? Its user-driven nature, that is the role played by the large users of software as compared to the roles of independent software houses, is considered to be an important factor. The structure explains the fact that the Japanese software industry is characterized by a high degree of customized software and that the efficiency gains can be obtained by software factories in several of the large computer-related companies (Barr and Tessler 1995). However, the structure of the Japanese software industry has inhibited the development of packaged software and also the evolution of innovative independent software houses. With the current trend in the computer industry towards downsizing and open systems, the structure of the Japanese software industry presents critical weaknesses.

A study of the Japanese software industry conducted by a team from Columbia University, University of Washington and the University of Victoria (Japan Information Access Project 1995) concluded that despite the claims of many industry observers the Japanese software industry is not going to converge with its US counterpart by a delayed but rapid move towards the extensive use of packaged software. Rather, large Japanese customers' software strategies will continue to emphasize customization, even for PCs. The packaged software that is purchased will be heavily customized, often doubling or tripling its total installed cost. Thus, the Japanese software industry has failed to become competitive except in games primarily due to users' preference for customized software despite initial expense combined with large systems producers' desire to maintain historically different operating platforms. At the same time, large users' and systems suppliers' preference for the present situation, i.e. customization, has helped foreign software developers to successfully penetrate and dominate new high growth sectors like network servers and workstations by pursuing a hub and spoke strategy that both builds their Japan and global user bases and improves their economics, further undermining the Japanese software industry.

IDC, a market research agency<sup>‡</sup>, forecasts that the key functional business outsourcing market in Japan will reach Yen 1,012.2 billion in 2008 with a compound annual growth rate (CAGR) of 8.8 percent between 2003 and 2008 (IDC website). User companies have high expectations for using BPO as an option of their business strategies on selection and concentration and cost reduction.

<sup>‡</sup> IDC is the premier global provider of market intelligence, advisory services, and events for the information technology and telecommunications industries. IDC is a subsidiary of IDG, the world's leading technology media, research, and event management company. For more details see <http://www.idc.com>.

A recent IDC study forecasted that Japan's business process outsourcing (BPO) market would reach 1,012.2 billion Yen in 2008 with a compound annual growth rate (CAGR) of 8.8% between 2003 and 2008. User companies have high expectations for using BPO as an option of their business strategies on selection and concentration and cost reduction (IDC 2004).

"The market environment surrounding companies, such as globalization of business and escalation of market competition, is changing, which calls for operation reform", said Satoshi Matsumoto, senior market analyst, IT services, IDC Japan. He adds that service providers will have to develop strategic services to realize cost reduction of user companies, create new businesses, and increase the value of shareholders. Japanese firms started to experiment off shoring of selected service works to other countries to reduce cost of production.

Japan has the largest Internet population in Asia. According to data from the Electronic Commerce Promotion Council of Japan (ECOM)<sup>§</sup>, online service in Japan grew by 58.4 percent in 2001 and reached a total value of US\$ 264.5 billion (ECOM website).

### **3. Complementarities between Japan and India in IT and ITES**

Trade in services in India and Japan is highly dependent on markets like EU and USA. Any change in these economies will substantially affect the sustainability of the related industries in both India and Japan.

India's main advantage lies in the abundance of comparatively low paid labour. Highly skilled Indian IT professionals are in high demand across the developed world. Japanese programmers have a reputation for producing excellent software, though the industry faces skilled manpower shortage. It is believed that Japanese software has been delivered with hundred times fewer errors than typical American software.

India has comparatively small computer hardware industry, while Japan enjoys highly developed hardware sector. Lack of proper control over hardware industry made India a dependent of US-based hardware giants. Indian computer manufacturers are mere assemblers or dealers of Western computer hardware companies. On the other hand, Japan has less control over operating systems and application software of common use, which force the country to depend on EU and US for these core service platforms.

India's main attraction in the Western world is the reserve of English speaking IT professionals. But, language might appear as a major hurdle in India-Japan collaboration in IT sector. However, this also offers an opportunity for joint collaboration in third country marketing.

A major barrier which curb India-Japan ICT collaboration is the lack of knowledge about the Japanese language and business culture, competition from local companies, lack of business information, labour laws and compensation package, immigration rules and policies like work permits and visas.

Another common problem is that US still have the upper hand in the control of Internet and other vital areas of information flow. Therefore, India-Japan collaboration may open a way to the alternative systems of Internet.

According to the Federation of Indian Chamber of Commerce and Industry, a number of Japanese IT firms are inclined to outsource their ICT work to India (FICCI 2004). If India is able to explore Japanese market in BPO and software industries, India will certainly gain both

---

<sup>§</sup> Electronic Commerce Promotion Council of Japan (ECOM) was newly established on April 1st, 2005. for more details see website [http://www.ecom.or.jp/ecom\\_e/](http://www.ecom.or.jp/ecom_e/)

in terms of employment and export earning. At the same time, India's excessive dependence on EU and US markets also can be reduced and through market diversification both India and Japan can gain in international trade in services. Japanese ICT firms are aware of Indian ICT industry. But inadequacy of interactions and confidence-building negotiations with Indian counterparts pulls back the opportunities. In the wake of Knowledge Process Outsourcing (KPO) both India and Japan have advantages and possibilities of cooperation in high end services like Research and Development (R&D), intellectual property research, space nanotechnology etc. where growing demand of high end software services is reported. Indian English speaking skilled software experts can compliment Japanese non-English speaking population in exporting services in high-end research.

#### **4. GATS Negotiations: An Opportunity to Solve Differences**

Forthcoming Hong Kong Ministerial Meeting (December 2005) is an opportunity for India and Japan to discuss and settle the multilateral issues and concerns on trade in services. Existing differences between India and Japan in IT and ITES can be solved in the coming negotiations if the discussions move in proper directions.

##### **4.1 GATS Revised Offer by Japan**

Japan submitted its conditional revised offer to the WTO Secretariat on June 17, 2005. This offer is based on the request-offer negotiations undertaken on a bilateral basis as well as the on-going discussions that have been made on various occasions. This offer was also developed taking into full account the interests of developing countries. It also does not have any a priori exclusion regarding sectors and modes of supply.

Government of Japan expects that WTO members will submit revised offers, which achieve a higher level of liberalization and higher degree of transparency and clarity, based on initial and revised requests presented by Japan, and discussions made so far in the CTS.

Taking into account of communication from the countries like India, Thailand, etc., Japan improved comparability and clarity in the scheduled commitments on the entry and temporary stay of a natural person by using common categories such as 'intra corporate transferees'.

##### **4.2 GATS Revised Offer by India**

India has already undertaken unilateral liberalization and it now seeks to bind underlying moves on liberalization in WTO and in exchange for mutual commitments by its trading partners in the areas of interest to India. India offered full liberalization Modes 1, 2 and 3 for reciprocal commitments from trading partners. India also offered limited market access and national treatment commitments to some selected services under Mode 4. In computer and related services, India removed most of the limitations in market access and national treatment in all Modes of supply, except some limitations under Mode 4.

##### **4.3 Offers in Computer and related services**

Under WTO classification, computer and related services includes consultancy services related to the installation of computer hardware, software implementation services, data processing services, data base services and other services. Both India and Japan considered this area as vital in terms of employment and export revenue.

India has requested Japan to take full commitments in Mode 4 and schedule 'none'. Japan's revised offer has not done so. India has also requested Japan to make the commitments like, recognition of educational qualifications, training and experience of Indian professionals and

exemption of temporary suppliers of services from host country's social security taxes and contributions. Request has also been made to enter into Totalisation of Agreements. But Japan's revised offer has not responded to these requests.

Japan has requested in revised offer that India should make commitments on market access and national treatment in computer and related services in which it has not made full commitments. Japan has requested India to provide detailed information on the regulations, which are, applied to IT services and the services utilizing e-commerce and Internet. India has addressed most of the issues in revised offer with some exemptions under Mode 4. Japan has undertaken specific commitments Mode 3 and Mode 4 in computer and related services. Therefore, revised offers of Japan and India in CTS provide opportunities in strengthening bilateral cooperation in trade in services, especially in IT and ITES, where India and Japan have substantial bilateral complementarities.

#### **4.4 Recent Initiatives**

The first meeting of the India-Japan ICT ministerial forum is likely to be held on November 2, 2005 in New Delhi with Minister of Communications and Information Technology Dayanidhi Maran and Japan's Minister of Internal Affairs and Communications Taro Aso leading their respective delegations. The Japanese delegation will comprise over 100 members, representing the Government and the industry while the Indian delegation will comprise members from leading Indian ICT companies, the government and R&D agencies. The forum is the outcome of a programme of cooperation, comprising eight initiatives chalked out by Prime Minister Manmohan Singh and Prime Minister of Japan Junichiro Koizumi during the latter's visit to India in March. The New Delhi meet will mainly aim at the opportunities for increasing ties between Indian and Japanese institutions and industries in the fast growing sectors of IT and telecommunications and the need to leverage the complementarities of each other.

The Ministerial level meeting will see the signing of a joint statement for bilateral cooperation in communications and information technology, wherein both sides will seek to develop joint proposals in R&D, HRD in the ICT sector, e-governance, IT enabled services, e-commerce, communications and IT software, rural telecommunication and ubiquitous network society. The ICT Forum will constitute working groups, to be primarily led by the industry in of areas broadband, mobile communications, e-governance, information security, R&D and ubiquitous computing. The Japanese Minister is likely to extend overseas development assistance (ODA) to India to take ICT to schools with an objective of stimulating millions of young minds in information and communications technologies. Therefore, these developments at bilateral level between India and Japan may extend to other members in BIMSTEC region and may become guidelines for a new information technology-led trade in services regime in the region.

#### **5. Conclusions**

India's key advantages in the global IT and ITES-BPO industry is the availability of an abundant, high quality and cost-effective pool of skilled knowledge workers. Thus, the Japanese software industry has failed to become competitive except in games primarily due to users' preference for customized software despite initial expense combined with large systems producers' desire to maintain historically different operating platforms. Trade in services in India and Japan is highly dependent on markets like EU and USA. Any change in these economies will substantially affect the sustainability of the related industries in both India and Japan. India has comparatively small computer hardware industry, while Japan enjoys highly developed counter part. On the other hand, Japan has less control over operating systems and application software of common use, which force the country to depend on EU and US for these core service platforms. A major barrier which curb India-Japan ICT

collaboration is the lack of knowledge about the Japanese language and business culture, competition from local companies, lack of business information, labour laws and compensation package, immigration rules and policies like work permits and visas. In the wake of Knowledge Process Outsourcing (KPO) both India and Japan have advantages and possibilities of cooperation in high end services like Research and Development (R&D), intellectual property research, space nanotechnology etc. where growing demand of high-end software services is reported. Indian English speaking skilled software experts can compliment Japanese non-English speaking population in exporting services in high-end research. Forthcoming Hong Kong Ministerial Meeting is an opportunity for India and Japan to discuss and settle the multilateral issues and concerns on trade in services. Existing differences between India and Japan in IT and ITES can be solved in the coming negotiations if the discussions move in proper directions. The ICT Forum will constitute working groups, to be primarily led by the industry in of areas broadband, mobile communications, e-governance, information security, R&D and ubiquitous computing. The Japanese Minister is likely to extend overseas development assistance (ODA) to India to take ICT to schools with an objective of stimulating millions of young minds in information and communications technologies. Therefore, these developments at bilateral level between India and Japan may extend to other members in BIMSTEC region and may become guidelines for a new information technology led trade in services regime in the region.

## References

- Barr, Avron and Shirley Tessler. (1995), *An Overview of the Software Industry*, *Stanford Computer Industry Project*. Accessed from <http://www.aldo.com/papers/swi.overview.html>
- ECOM website, <http://www.ecom.jp/en/index.html>
- FICCI. (2004), *Enhancing Business Relationship in ICT with Japan*, *Survey Report*, Accessed from FICCI website ([www.ficci.com](http://www.ficci.com))
- Government of India. (2004), *Ministry of Electronics and Information Technology*, *Year book 2004*.
- Government of India. (2002), *Ministry of Commerce and Industry*, *Yearbook 2002*.
- IDC. (2004), *Japan Business Process Outsourcing 2004-2008 Forecast*, accessed from <http://www.idc.com/getdoc.jsp?containerId=JP222208L>.
- Japan Information Access Project. (1995), *The Future Evolution of Japanese-US Competition in Software: Policy Challenges and Strategic Prospects*, Report Submitted to the Japan-United States Friendship Commission by the Center on Japanese Economy and Business Columbia Business School, Columbia University.
- NASSCOM -[www.nasscom.org](http://www.nasscom.org)
- Sajikumar. S. (2005), *Work And Workers in the New Economy: A Study Of Work Organisation and Labour Process in the Background of General Agreement on Trade in Services (GATS)*, *NLI Research Study Series* (Forthcoming) VV Giri National Labour Institute, NOIDA, India.
- UNCTAD. (2002), *E-Commerce and Development Report*, United Nations, Geneva.
- World Bank. (2005), *World Development Indicators*, CD ROM.
- WTO (2004a), *Annual Report 2004*, Geneva
- WTO (2004b), *International Trade Statistics*, WTO website ([www.wto.org](http://www.wto.org))