Indian Information Technology Sector

The Indian Information Technology sector can be classified into the following broad categories - IT Services, Engineering Services, ITES-BPO Services and E Business.

IT Services can further be categorized into Information Services (IS) outsourcing, packaged software support and installation, systems integration, processing services, hardware support and installation and IT training and education.

Engineering Services include Industrial Design, Mechanical Design, Electronic System Design (including Chip/Board and Embedded Software Design), Design Validation Testing, Industrialization and Prototyping.

IT Enabled Services are services that use telecom networks or the Internet. For example, Remote Maintenance, Back Office Operations, Data Processing, Call Centers, Business Process Outsourcing, etc. IT sector is attracting considerable interest not only as a vast market but also as potential production base by international companies. Therefore India is considered as a pioneer in software development and a favorite destination for IT-enabled services.

The rapid growth in the sector is a consequence of access to trained English-speaking professionals, cost competitiveness and quality telecommunications infrastructure. Companies operating from India are able to leverage the advantage of the Indian time zone to offer 24 x 7 services to their global customers. Several world leaders including General Electric, British Airways, American Express, and Citibank, have outsourced call centre operations to India.

E Business (electronic business) is carrying out business on the Internet; it includes buying and selling, serving customers and collaborating with business partners.

The following are some of the strengths of the Indian IT sector:

- Highly skilled human resource;
- Low wage structure;
- Quality of work;
- Initiatives taken by the Government (setting up Hi-Tech Parks and implementation of e-governance projects);
- Many global players have set-up operations in India like Microsoft, Oracle, Adobe, etc.;

- Following Quality Standards such as ISO 9000, SEI CMM etc.;
- English-speaking professionals;
- Cost competitiveness;
- Quality telecommunications infrastructure.

The following are some of the weaknesses of the sector:

- Absence of practical knowledge;
- Dearth of suitable candidates;
- Less Research and Development;
- Contribution of IT sector to India's GDP is still rather small;
- IT development concentrated in a few cities only.

Regulatory Regime and Laws relating to the IT sector:

Department of Information Technology (DIT):

This department which is under the Ministry of Communications and Information Technology is responsible for the formulation, implementation and review of national policies in the field of Information Technology including hardware and software, standardization of procedures, internet, e-commerce and information technology education and development of electronics.

Initiatives for development of Hardware/Software industry including knowledge-based enterprises, measures for promoting IT exports and competitiveness of the industry are looked after by the Electronics Export and Computer Software Promotion Council (ESC) and National Informatics Centre (NIC) along with DIT.

The Department of Information Technology undertakes the following functions:

- Policy matters relating to Information Technology; Electronics; and Internet (all matters other than licensing of Internet Service Provider).
- Promotion of Internet, IT and IT enabled services.
- Assistance to other departments in the promotion of E-Governance, E-Commerce, E-Medicine, E-Infrastructure, etc.
- Promotion of Information Technology education and Information Technology-based education.
- Matters relating to Cyber Laws, administration of the Information Technology Act. 2000 (21 of 2000) and other IT related laws.

- Matters relating to promotion and manufacturing of Semiconductor Devices in the country; The Semiconductor Integrated Circuits Layout Design Act, 2000 (37 of 2000).
- Interaction in IT related matters with International agencies and bodies e.g. Internet for Business Limited (IFB), Institute for Education in Information Society (IBI) and International Code Council - on line (ICC).
- Initiative on bridging the Digital Divide: Matters relating to Media Lab Asia.
- Promotion of Standardization, Testing and Quality in IT and standardization of procedure for IT application and Tasks.
- Electronics Export and Computer Software Promotion Council (ESC).
- National Informatics Centre (NIC).
- Initiatives for development of Hardware / Software industry including knowledge-based enterprises, measures for promoting IT exports and competitiveness of the industry.
- All matters relating to personnel under the control of the Department.

National Association of Software and Services Company (NASSCOM):

NASSCOM acts as an advisor, consultant and coordinating body for the IT-BPO industry in India, and has played a key role in enabling the government in India to develop industry friendly policies. NASSCOM was set up in 1988 to facilitate business and trade in software and services and to encourage advancement of research in software technology. It is a not-for-profit organization, registered under the Indian Societies Act, 1860.

NASSCOM has been proactive in pushing this cause for ensuring that the Indian Information Security environment benchmarks with the best across the globe. As a part of its Trusted Sourcing initiative, NASSCOM is in the process of setting up the Data Security Council of India (DSCI) as a Self Regulatory Organization (SRO) to establish, popularize, monitor and enforce privacy and data protection standards for India's ITeS-BPO industry. DSCI shall function as an enabler to the IT and ITeS industry to grow at a rapid pace by facilitating the adoption and enforcement of the prescribed security standards and best practices.

Information Technology Act, 2000:

The legal enactment which governs the process and dissemination of information digitally in India is the Information Technology Act, 2000. The Act along with its Rules legalizes the acceptance of electronic records and digital signatures providing a legal backbone to e-commerce.

The Indian Information Technology Act addresses the following issues:

- Legal Recognition of Electronic Documents;
- Legal Recognition of Digital Signatures;
- Offenses and Contraventions;
- Justice Dispensation System for Cybercrimes.

Government Initiatives:

The Foreign Trade Policy 2004 - 2009 permits import of all kinds of computers (except second hand computers) in India without any licenses.

In order to promote domestic investment, foreign direct investment, transfer of technology / process know-how, technical collaboration, joint venture etc in India and export IT software products and services from India to the global market, both Government of India and State Governments in India have been offering a series of policy packages including tax breaks, import duty concessions etc under various schemes which include:

- Export Oriented Units (EOUs) Scheme: The purpose of the scheme was basically to boost exports by creating additional production capacity.

- Electronics Hardware Technology Parks (EHTPs): Electronics Hardware Technology Park (EHTP) complexes can be set up by the Central Government, State Government, Public or Private Sector Undertakings or any combination thereof, duly approved by the Inter-Ministerial Standing Committee (IMSC) in the Ministry of Communication and Information Technology (Department of Information Technology).

- Software Technology Parks (STPs): The Software Technology Parks of India (STPI) have been set up by the Ministry of Information Technology, Government of India and the International Technology Park in a joint project by the State Government.

- Special Economic Zone (SEZ) Scheme: SEZs are being set up to enable hassle free manufacturing and trading for export purposes.

Sales from Domestic Tariff Area (DTA) to SEZs are being treated as physical export. This entitles domestic suppliers to Drawback/ DEPB benefits, CST exemption and Service Tax exemption.

Certain exemptions like Income Tax exemption on export profits is available to SEZ Units for 5 years, 50% for next 2 years and 50% of ploughed back profits for 3 years thereafter are available for units in these designated areas/zones.

- Export Promotion Capital Goods (EPCG) Scheme: The EPCG Scheme allows import of capital goods for pre-production, production and post-production (including CKD/SKD thereof) at 5% customs duty subject to export obligations.

Units undertaking to export their entire production of goods and services may be set up under the Export Oriented Unit (EOU) Scheme, Electronic Hardware Technology Park (EHTP) Scheme or Software Technology Park (STP) Scheme.

The Export Promotion Industrial Park, built near International Technology Park, gives an exclusive 288 acres of area for export oriented business. GE has its India Technology Center located at this park and employs hundreds of multi disciplinary technology development activities.

An industrial park, known as Electronic City was set up in 1991 taking more than a hundred electronic industries including Motorola, Infosys, Siemens, ITI, and Wipro, in an area of around 330 acres.

The IT Corridor project, conceptualized by Singapore's Jurong Town Corporation Private Ltd, was initiated by the Department of IT and the Bangalore Development Authority in order to develop state of the art facilities for the development of knowledge based industries.

Government initiatives for the ITes Sector:

The government of India has already set up a single-window facility for attracting foreign direct investments in this sector.

Recognizing the potential of this sector, the government has provided many incentives including a tax holiday up to 2010 and competitive duty structures.

In addition to the central government incentives, respective state governments have also developed attractive incentive packages to target investors.

The government is also actively trying to reduce international communication cost. The telecommunications ministry has already started phased liberalization programme.

In order to support IT-related services, the government is providing some special incentives and is also providing infrastructure support through organizations such as the Software Technology Parks (STP).

Financial institutions and venture capitalists in the country are willing to provide funds at competitive rates for expansion in ITes businesses.

All these factors collectively create a number of opportunities in the IT sector.

Tax Incentives / Budget 2008-09:

- Excise duty being increased on packaged software from 8 per cent to 12 per cent, bringing it at par with customized software attracting a service tax of 12 per cent.

- Customized software has been brought under the service tax net to bring it on par with the packaged software and other IT services.

- Specified parts of set top boxes and specified raw materials for use in the IT/electronic hardware industry to be exempted from customs duty.

- Allocation to the Department of Information Technology enhanced to Rs.1, 680 crore in 2008-09 from Rs.1, 500 crore in 2007-08; Two Schemes for establishing 100,000 broadband internet-enabled Common Service Centres in rural areas and State Wide Area Networks (SWAN) with Central assistance under implementation; new scheme for State Data Centres also approved; Rs.75 crore provided for the common service centres; Rs.450 crore provided for SWAN and Rs.275 crore for the State Data Centres.

Market Trends:

Information Technology:

The Information Technology (IT) sector in India is amongst the fastest growing in the country and the world. It is expected that by the year 2008, IT software and services industry will account for 7 per cent of India's GDP and 35 per cent of total exports.

The Indian domestic IT market grew by 29% in the financial year 2007-08 to report revenues of Rs 288, 810 crore.

The revenue of the information technology sector has grown from 1.2 per cent of the gross domestic product (GDP) in FY 1998 to an estimated 5.5 per cent in FY 2008. The net value added by this sector, to the economy, is estimated to be 3.3 to 3.9 per cent for FY 2008.

The Indian IT-BPO sector grew by 33 per cent in FY 2008 to reach US$ 64 billion in aggregate revenue (including hardware). Of this, the software and services segment accounted for US$ 52 billion, growing by 28 per cent over FY 2007.

Software and services exports (including exports of IT services, BPO, engineering services and R&D and software products) reached US$ 40.4 billion, contributing nearly 63 per cent to the overall IT-BPO revenue aggregate.

IT-BPO exports (including hardware exports) grew by 28 per cent from US$ 31.8 billion in FY 2007 to US$ 40.9 billion in FY 2008.

Domestic IT market (including hardware) reached US$ 23.1 billion in FY 2008 as against US$ 16.2 billion in FY 2007, a growth of 43 per cent. Hardware remained the largest segment of the domestic market with a growth rate of 44 per cent in FY 2008. Software and services spending grew by over 41 per cent during the year.

The Indian IT services market is estimated to remain the fastest growing in the Asia-Pacific region with a CAGR of 18.6 per cent.

IT enabled Services (ITeS):

The IT / ITeS industry's contribution to the country's gross domestic product (GDP) has grown from 1.2 per cent in FY 1998 to an estimated 5.5 per cent in FY

2008. The net value-added by this sector, to the economy, is estimated at 3.3-3.9 per cent for FY 2008.

The Indian IT-ITeS sector (including hardware) grew by 33 per cent in FY 2008 to reach US$ 64 billion in aggregate revenue. Of this, the ITeS/BPO sector contributed US$ 12.5 billion as against US$ 9.5 billion in FY 2007, an increase of 31 per cent.

The Indian ITeS-BPO exports grew significantly from US$ 8.4 billion in FY 2007 to US$ 10.9 billion in FY 2008 while the revenues of domestic BPO grew to US$ 1.6 billion in FY 2008 from US$ 1.1 billion in FY 2007. The sector provided direct employment to 700,000 in FY 2008 up from 553,000 in FY 2007.

India IT/ ITeS Industry Size (2007-12)
(Value in Rs. Crore)

	2007	2008	2009	2010	2011	2012	CAGR 07-12
Domestic IT/ ITeS Market	90,014	110,177	133,100	158,053	182,991	209,698	18.4%
IT/ IteS Exports Revenue	156,594	186,142	218,107	250,087	284,666	320,278	15.4%
India IT/ ITeS Industry Size	246,609	296,319	351,207	408,139	467,657	529,976	16.5%

Foreign Direct Investment (FDI) Policy:

100% FDI is permitted in the Electronic hardware sector and the Software development sector under the automatic approval route.

Industrial Licensing has been virtually abolished in the Electronics and Information Technology sector except for manufacturing electronic ærospace and defence equipment.

IT / ITes Export Trends:

The Software exports are projected to grow by $9 billion to $50 billion in fiscal 2008-09 from $41 billion in fiscal 2007-08 and $32 billion in fiscal 2006-07.

Exports contribute nearly 65% of the Indian IT sector revenue.

The United States and Britain are the biggest markets for India's booming software exports, accounting for about 80 percent of the country's $12-billion-exports per year.

ITeS/BPO exports grew by over 30 per cent from the previous year collecting revenues of US$ 10.9 billion in FY 2008.

Export Figures of India's IT Industry

(USD Billion)

	2004	2005	2006	2007
IT Services	**10.4**	**13.5**	**17.8**	**23.7**
Exports	7.3	10.0	13.13	18.1
Domestic	3.1	3.5	4.5	5.6
ITES-BPO	**3.4**	**5.2**	**7.2**	**9.5**
- Exports	3.1	4.6	6.3	8.3
- Domestic	0.3	0.6	0.9	1.2
Engineering services, R&D and Software products	**2.9**	**3.9**	**5.3**	**6.5**
- Exports	2.5	3.1	4.0	4.9
- Domestic	0.4	0.7	1.3	1.6
Hardware	**5.0**	**5.9**	**7.0**	**8.2**
Total IT industry	**21.6**	**28.4**	**37.4**	**47.8**
- Exports	13.4	18.2	24.1	31.9
- Domestic	8.3	10.2	13.2	15.9

Although for exports, the US (61 per cent) and UK (18 per cent) continue to be the largest markets for IT-ITES exports, the share of Europe has been increasing steadily. Exports to Continental Europe have grown at a compound annual growth rate (CAGR) of more than 55 per cent over FY 2004-07. The ITeS sector is also working towards reducing its dependence on the US market and is exploring new and emerging markets such as those in Australia and the Middle East.

India's IT Export Percentage

	FY 2003	FY 2004	FY 2005	FY 2006
Americas	69.10%	69.40%	68.30%	67.18%
Europe	22.20%	22.60%	23.10%	25.13%
Rest of the World	8.70%	8.00%	8.60%	7.69%

India's export of IT software and services to EU countries during 2007-08 touched a level of US $ 11.518 billion i.e. 26.50 per cent of India's total IT software / services exports to the world market. India's IT exports to major EU countries during 2007-08 were as under:

India's IT Export to EU Countries

Country	Computer Software/Services 2006-07 US$ Million	Computer Software/Services 2007-08 US$ Million
United Kingdom	6474.53	6668.59
Netherlands	580.65	916.17
German F Rep	526.20	1173.31
Belgium	319.32	246.46
Finland	283.95	205.35
France	240.71	233.95
Ireland	223.60	94.99
Sweden	156.48	88.76
Denmark	107.73	96.42
Spain	67.62	282.85
Italy	32.82	104.40
Austria	14.40	99.87
Greece	6.14	19.92
Portugal	3.31	6.27
Luxemburg	1.13	12.65
Others	75.86	1269
Grand Total	**9114.45**	**11518.88**

Key Players:

The following are India's Tier 1 companies in the IT sector:

- Tata Consultancy Services Ltd.

- Wipro Technologies Ltd.

- Infosys Technologies Ltd.

- Satyam Computer Services Ltd.

The other key players include the following:

- IBM
- HCL
- Patni
- Polaris
- Cisco
- KPIT Cummins
- Kanbay
- i-Flex Solutions
- Cognizant
- Sapient
- Mphasis

Global IT players in India:

There are a large number of multi-national IT enterprises operating in India in sectors such as: Integrated Chip Design, System Software, Communication Software, R&D Centres, Technology Support Sector, Captive Support Sector, BPO Sector etc reaping the cost and quality advantages.

These multinationals include Siemens, Philips, Intel, Texas Instruments etc. (Chip Design); Siemens, Motorola, Lucent Technologies, Sony, Nortel etc. (Communication Software); Microsoft, Oracle, Sun Microsystems, HP, Compaq etc. (Systems Software); Google, Yahoo etc. (R&D Centres); Axa Business Services, Swiss Shared Services, Siemens Shared Services etc. (BPO Sector); Accenture, DELL, HSBC, GE Capital, Fidelity etc. (Captive Support Sector).

Localization of the IT industry:

The Indian state of **Karnataka** dominates other Indian states in terms of attractiveness as an IT destination with the city of Bangalore being at the topmost. Bangalore offers good infrastructure, with large floor space and great telecom facilities and is therefore the most preferred destinations of all the big banners like HSBC, Dell, Microsoft, GE, Hewlett Packard, and several Indian multi national firms like Infosys Technologies, Wipro, and Microland who have set up their offices in the city.

The state of **Andhra Pradesh**, backed by the emergence of the city of Hyderabad as a major IT hub, ranks as the second IT hub of India.

This is followed by the state of **Tamil Nadu** and **Maharashtra**. The city of Chennai in Tamil Nadu is emerging as a global capital for business process outsourcing (BPO) and is propelling Tamil Nadu to the number one position in IT exports. The state is a pioneer in IT and software services, and has a 100 percent digital exchange network thus having the potential to garner a major chunk of ITeS business.

Maharashtra is the second largest exporter of software with annual exports of Rs 18 000cr (20% of India's software exports). The state has set up software parks in Pune, Mumbai, Navi Mumbai, Aurangabad, Nagpur and Nasik.

Globally branded firms have their presence in the state of **Gujarat**. Nasscom (National Association of Software and Services Companies) has ranked the city of Ahmedabad in Gujarat to be among the top five Indian destinations for business process and knowledge process outsourcing.

The state of **West Bengal** is beginning to be recognized as the fastest growing IT destination in the country with more than double the national average growth rate. A number of IT majors are doing significant business in the city of Kolkata. West Bengal aims to become one of the top three IT states by 2010, contributing 15-20 per cent of the country's total IT revenue.

Growth of the Indian IT Sector:

The Indian information technology sector is one of the sunshine sectors of the Indian economy showing rapid growth and promise.

The Indian IT-BPO sector is estimated to reach a target of US$ 60 billion in exports and US$ 73-75 billion in overall software and services revenues by 2010. India's information and communication technology market is estimated to grow 20.3 per cent annually to reach US$ 24.3 billion by 2011.

The Indian IT and ITeS market is estimated to grow at the rate of over 16 per cent to become a US$ 132 billion industry, significantly, the domestic market alone is expected to become over US$ 50 billion, with a CAGR of about 18.4 per cent. Simultaneously, the IT and ITeS exports are estimated to more than double to US$ 78.62 billion by 2012.

Leading international companies have identified custom application development and maintenance as priority areas due to high offshoreable component.

The demand for domestic BPOs has been largely driven by faster GDP growth and by sectors such as telecom, banking, insurance, retail, healthcare, tourism and automobiles.

ITES now offers services such as Knowledge Process Outsourcing (KPO), Legal Process Outsourcing (LPO), Games Process Outsourcing (GPO) etc. More and more sophisticated products are being developed in India. The domestic BPO segment is growing annually at a rate of nearly 35 - 40 %.The revenues generated by the BPO's are almost $1.18 million and the domestic market is expected to reach $10 billion by the end of the financial year 2008. If it continues to grow by the current rate then by the end of the financial year 2012 then IT and IT enabled services will reach nearly US$330 million.

The electronics hardware is growing at over 30% and is expected to grow rapidly in the coming years and is estimated to be US$62 billion by 2010.

According to a recent World Bank study, India is the preferred location for software vendors for its quality and cost. India has strong UNIX base which provides opportunity for the development of products for internet based applications. Further, India has global connectivity with international dialing facility from over 13220 locations, Leased/switched high-speed data links from major centers through STPs and VSNL for point-to-point communication are also available.

Abundant investment opportunities exist in the following thrust areas in India:

- Communication Infrastructure

- Optic Fiber Cable
- Gateways
- Satellite based Communication Wireless
- Software Development
- IT-enables Services
- IT-enabled education
- Data Centers & Server Farms

Hence IT sector is attracting considerable interest not only as a vast market but also as potential production base by international companies. And it is one of the fastest growing segments of the Indian industry both in terms of production and exports.