# IT-ITeS

## MARKET & OPPORTUNITIES

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# IT-ITeS

## MARKET & OPPORTUNITIES

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*A report by Ernst & Young for IBEF*

# IT-ITeS Sector – Reinforcing the 'India Advantage'

The Indian Information Technology ('IT') and IT enabled Services ('ITeS') sector has matured considerably with its expansion into different service verticals and offerings, and increasing geographic penetration. The success of the sector has led to India firmly finding its position in the sourcing strategy of large corporations across the globe.

IT-ITeS sector has proved the sustainability of the 'India advantage tag, of which it was one of the early promoters. The initial enthusiasm about other emerging low-cost destinations has tided over with global multinational corporations indicating their preference for India as one of the key off-shoring destinations.

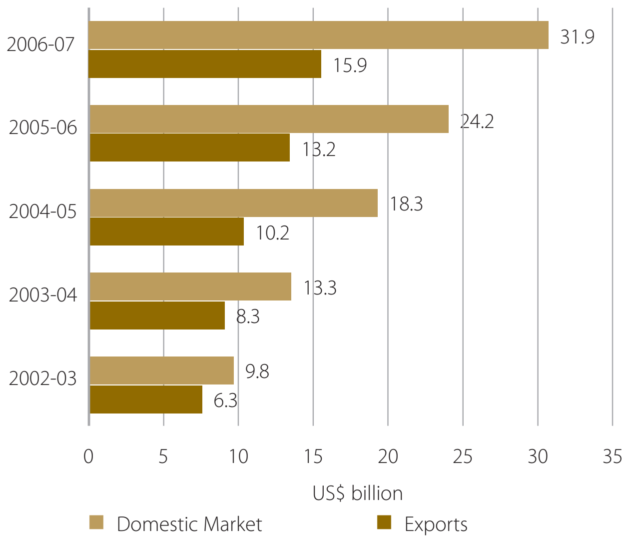
India topped A.T. Kearney Global Services Location Index, ranking ahead of 49 other countries, emerging to be the destination of choice as an off-shoring location for multinational corporations across the globe.

The industry players in India have endured pressures on their margins, in the form of rising wage costs and rising rupee valuation and have managed to carve a distinct identity in the industry.

## IT–ITES SECTOR ACCOUNTS FOR ABOUT 5.4 PER CENT OF INDIA'S GROSS DOMESTIC PRODUCT (GDP)

The Indian IT-ITeS sector revenues registered a growth rate of 32.6 per cent, increasing from US$ 28.2 billion in 2004-05 to US$ 37.4 billion in 2005-06. The National Association of Software and Services Companies (NASSCOM) estimates the sector revenues at US$ 47.8 billion in 2006-07, a growth rate of 28 per cent over 2005-06. Further NASSCOM estimates the Indian technology sector to account for approximately 5.4 per cent of the GDP in 2006-07. Direct employment in the industry is estimated at 1.6 million by the end of 2006-07.

**IT/ITeS Sector Revenues**




Source: NASSCOM

The sector is well within reach of the US$ 60 billion exports target set for 2009-10, requiring the sector to grow at 23.2 per cent.

The hardware segment accounts for about 19 per cent of India's aggregate revenues. Bulk of the hardware segment's revenues is accounted for by the domestic market. The hardware segment revenues have increased by about 25 per cent from US$ 5.7 billion in 2004-05 to US$ 7.1 billion in 2005-06. NASSCOM estimates the hardware revenues to reach US$ 8.1 billion in 2006-07.

**IT-ITeS Revenues (in US$ billion)**

| | 2005-06 | 2006-07 | Growth |
|---|---|---|---|
| IT Services | 17.8 | 23.6 | 32.58% |
| Exports | 13.3 | 18.0 | 35.34% |
| Domestic | 4.5 | 5.6 | 24.4% |
| Engineering services and R&D, software products | 5.3 | 6.5 | 22.64% |
| Exports | 4.0 | 4.9 | 22.5% |
| Domestic | 1.3 | 1.6 | 23.08% |
| ITeS | 7.2 | 9.5 | 31.94% |
| Exports | 6.3 | 8.4 | 33.33% |
| Domestic | 0.9 | 1.1 | 22.22% |
| Total software and services revenues | 30.3 | 39.6 | 30.69% |
| Exports | 23.6 | 31.4 | 33.05% |
| Domestic | 6.7 | 8.2 | 22.38% |
| Hardware | 7 | 8.2 | 17.14% |
| **Total** | **37.4** | **47.8** | **27.81**% |

Source: NASSCOM

## BANKING, FINANCIAL SERVICES AND INSURANCE VERTICAL CONTINUES TO ACCOUNT FOR THE LARGEST SHARE OF THE EXPORTS PIE

The aggregate Indian IT-ITeS sector exports have grown at a rate of 32 per cent from US$ 18.2 billion in 2004-05 to US$ 24.2 billion in 2005-06. NASSCOM estimates the exports revenue at approximately US$ 31.9 billion in 2006-07.

The IT services exports account for bulk of the sector's exports and is estimated to be growing at 32.6 per cent in 2006-07. The BPO segment exports have grown at a rate of 37 per cent from US$ 4.6 billion in 2004-05 to US$ 6.3 billion in 2005-06. NASSCOM estimates the segment growth at 32 per cent in 2006-07 to reach approximately US$ 8.3 billion in export revenues.

The Banking, Financial Services and Insurance ("BFSI") vertical continues to account for the largest share of the Indian IT-ITeS exports. The Telecom vertical accounts for the second largest share of the pie at 20 per cent. Together, both verticals account for close to 60 per cent of the Indian IT-ITeS exports. The other significant verticals include manufacturing, retail, media and healthcare.

| Revenue by Verticals | |
|---|---|
| BFSI | 38% |
| Hi-tech/Telecom | 20% |
| Manufacturing | 13% |
| Retail | 08% |
| Media, publishing and entertainment | 04% |
| Construction and utilities | 04% |
| Others | 13% |

Source: IDC, NASSCOM

## IT SERVICES – MAINSTAY OF THE SECTOR, REGISTERING CONSISTENT GROWTH

IT Services is the largest segment of the IT-ITeS industry in terms of its share in the global technology spends. The total spend on IT Services globally has grown from US$ 444 billion in 2004-05 to US$ 470 billion in 2005-06, registering a growth rate of about 5.9 per cent. The Indian IT Services aggregate revenues have grown from US$ 13.5 billion in 2004-05 to US$ 17.8 in 2005-06 registering a growth rate of 32 per cent. NASSCOM estimates the revenues from this segment at US$ 23.6 billion in 2006-07. The IT Services segment accounts for about 55 per cent of the Indian IT-ITeS exports revenue.

The different segments contributing to the exports revenue for 2005-06 is highlighted in the table overleaf.

The Project-oriented services account for about 58 per cent of the industry's IT Services exports, attributable to the high degree of perceived 'offshorability' of such services. Global corporates find these services to be the easiest to outsource to Indian vendors for reasons of it being an independent and isolated requirement.

The oldest and the most mature service offering of

**IT Services Export Revenues US$ Billion**

| Project Oriented | 7.71 |
|---|---|
| IT Consulting | 0.35 |
| Systems Integration | 0.37 |
| Custom Application Development | 6.54 |
| Network Consulting and Integration | 0.17 |
| Software Testing | 0.28 |
| **Outsourcing** | **4.36** |
| Application Management | 1.59 |
| IS Outsourcing | 0.84 |
| Others | 1.94 |

**IT Services Export Revenues US$ Billion**

| Support and Training | 1.23 |
|---|---|
| Software deployment and support | 0.99 |
| Hardware deployment and support | 0.08 |
| IT education and training | 0.17 |
| **Total** | **13.31** |

Source: NASSCOM

the industry are the custom application development and maintenance services. This service offering is expected to be the mainstay of the Indian exports revenues with the offshore model being most cost-effective for such services. Although custom application development accounts for only about 5 per cent of the global spends on technology, its high degree of 'offshorability' makes it a key service line for Indian players. The system integration and application management services are the other such mature service offerings of the Indian IT-ITeS sector.

The software testing services segment is widely considered to be the emerging segment with potential for a high degree of 'offshorability' and thereby opportunities in this segment can be well exploited by Indian companies. Another sub-segment with potential for rapid growth is the Information Systems ('IS') outsourcing service offering. The global offshore IS outsourcing spends is estimated to grow at a compounded annual growth rate of 44 per cent over 2004-05 – 2009-10. The Indian players have found considerable success in using the 'Global Delivery Model' effectively for delivering services in this sub-segment – which was traditionally considered to be an onshore business.

With pressure on margins and high degree of competition in the industry, the players are trying to differentiate themselves in the market in terms of their service offerings and quality of delivery. The players have recognised the importance of building domain knowledge and expertise in different verticals. The next logical step for the players would be to provide integrated end-to-end IT services to its clients. The Indian companies are now focusing their efforts on providing services such as IT consulting services in a bid to establish their presence at all points of the value chain and thereby win large and comprehensive outsourcing deals.

## PACKAGED SOFTWARE – EMERGING SEGMENT WITH A GROWTH RATE OF 39 PER CENT

The total global spend on packaged software has grown from US$ 211 billion in 2004-05 to US$ 228 billion in 2005-06, registering a growth rate of about 8 per cent. The Indian packaged software aggregate revenues have grown from US$ 3.8 billion in 2004-05 to US$ 5.3 in 2005-06 registering a growth rate of about 39 per cent. NASSCOM estimates the revenues from this segment at US$ 6.4 billion in 2006-07.

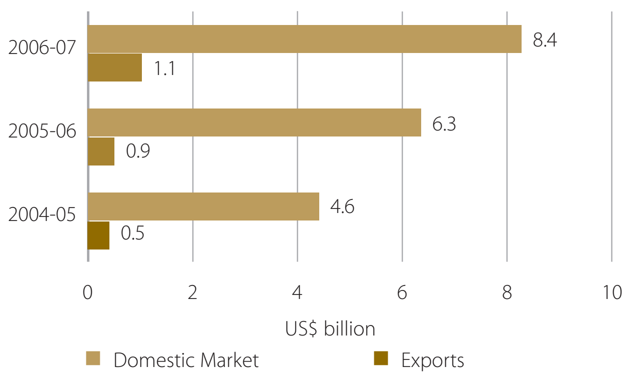
The packaged software segment accounts for about 17 per cent of the Indian IT-ITeS exports revenue. The export revenues from packaged & software segment have increased from US$ 3.1 billion in 2004-05 to US$ 4 billion in 2005-06 and are estimated at US$ 4.9 billion in 2006-07.

## BUSINESS PROCESS OUTSOURCING – GAINING TRACTION WITH MATURING CONCEPT OF OFFSHORING

The total global spend on BPO has increased from US$ 385 billion in 2004-05 to US$ 423 billion in 2005-06, registering a growth rate of about 10 per cent. The Indian BPO segment revenues have grown from US$ 5.2 billion in 2004-05 to US$ 7.2 in 2005-06 registering a growth rate of about 38 per cent. NASSCOM estimates the revenues from this segment at US$ 9.5 billion in 2006-07. The BPO services segment accounts for about 26 per cent of the Indian IT-ITeS exports revenue.

Over the past few years, the Indian BPO segment has gained considerable traction in the global markets in the form of increase in the scope of service offerings as well as the penetration across geographies and industry verticals.

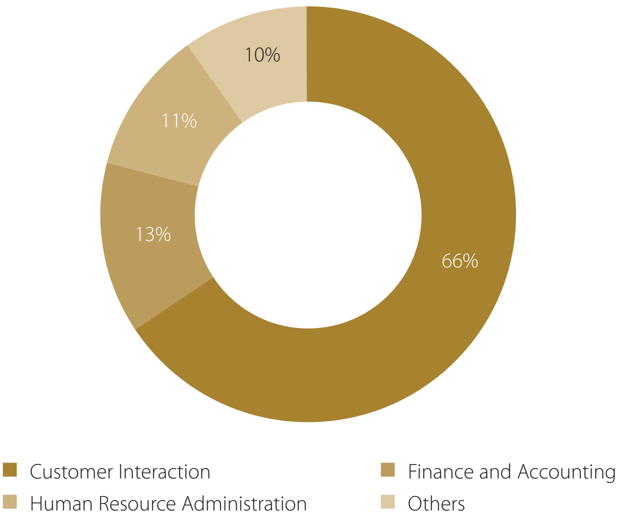
**IT/ITeS Sector Revenues**




Source: NASSCOM

The mainstay of the segment is the revenues from customer interaction services (CIS) and finance and accounting (F&A) service sub-segments. The scope of services in these segments was earlier limited to simple processes with very limited requirement for decision making on the part of offshore processing agents. With the Indian BPO segment maturing and moving up the value chain, more complex processes involving rule based decision making are being offshored to India. The customer interaction services account for more than 45 per cent of the BPO segment export revenues.

**Revenue by Segments**




Source: NASSCOM

Processes in the finance and administration segment such as tax compliance, regulatory compliance and statutory reporting, receivables and payables administration etc. have demonstrated a great degree of offshorability and hence account for more than 40 per cent of the BPO segment exports. The early trend for majority of the finance and accounting outsourcing deals leaned purely towards isolated transaction processing, while the focus is now shifting towards outsourcing of entire business processes.

The other sub-segments witnessing a high level of growth and demand in the BPO segment include hedge fund accounting, equity research, legal services, data analytics and data modeling. These services are believed to be on the cusp of exponential growth in the immediate future.

Similar to the IT Services segment, the service offerings from the BPO segment have matured considerably over the years with the players building their domain and process expertise to deliver value added services to their clients and also differentiate themselves in the highly competitive global markets. The emerging opportunity comprising of such services, involving the application of domain knowledge and expertise is termed as the Knowledge Process Outsourcing ('KPO') services.

## HARDWARE REVENUES GROWING WITH THE MATURING DOMESTIC MARKET

The total global spend on hardware has grown from US$ 424 billion in 2004-05 to US$ 457 billion in 2005-06, registering a growth rate of 5.9 per cent. The Indian hardware revenues have grown from US$ 5.2 billion in 2004-05 to US$ 6.5 billion in 2005-06, registering a growth rate of about 20 per cent. NASSCOM estimates the revenues from this segment at US$ 7.6 billion in 2006-07.

The domestic hardware spends in India accounted for 49 per cent of total domestic IT-BPO spends in 2005-06. NASSCOM estimates the hardware spends to increase from US$ 7.4 billion in 2005-06 to US$ 13.8 billion by 2009-10. Personal computers, notebooks and servers constituted bulk of the hardware spends with impressive volume growth in the segment.

Hardware designing is progressively being outsourced to Indian firms and commands the highest premium in software development domain, with premiums ranging from 11 per cent to as high as 40 per cent. Hardware manufacturing is also on the rise in India, with global firms establishing their software and hardware designing centers in India.

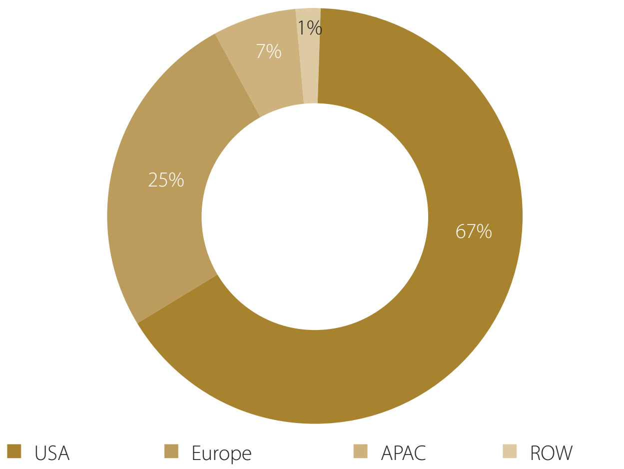
## USA CONTINUES TO BE THE DOMINANT MARKET

The Americas and Europe continue to be the key markets for the Indian IT-ITeS sector. The continents together accounted for approximately 90 per cent of overall IT-ITeS exports.

The US accounted for nearly 66 per cent of the overall software and services exports from India, while Europe with 25 per cent, remained one of the attractive markets in terms of year on year revenue growth. Americas is expected to continue to be the key market for Indian IT-ITeS sector.

The IT services spend from USA is expected to grow from US$ 575 billion in 2006-07 to approximately US$ 680 billion by the end of 2008-09, registering a compounded

Revenue by Geographies




Source: NASSCOM

annual growth rate of 8.3 per cent during the same period. The IT services spend in Asia Pacific is expected to register a relatively higher compounded annual growth rate of 11.6 per cent until 2008-09.

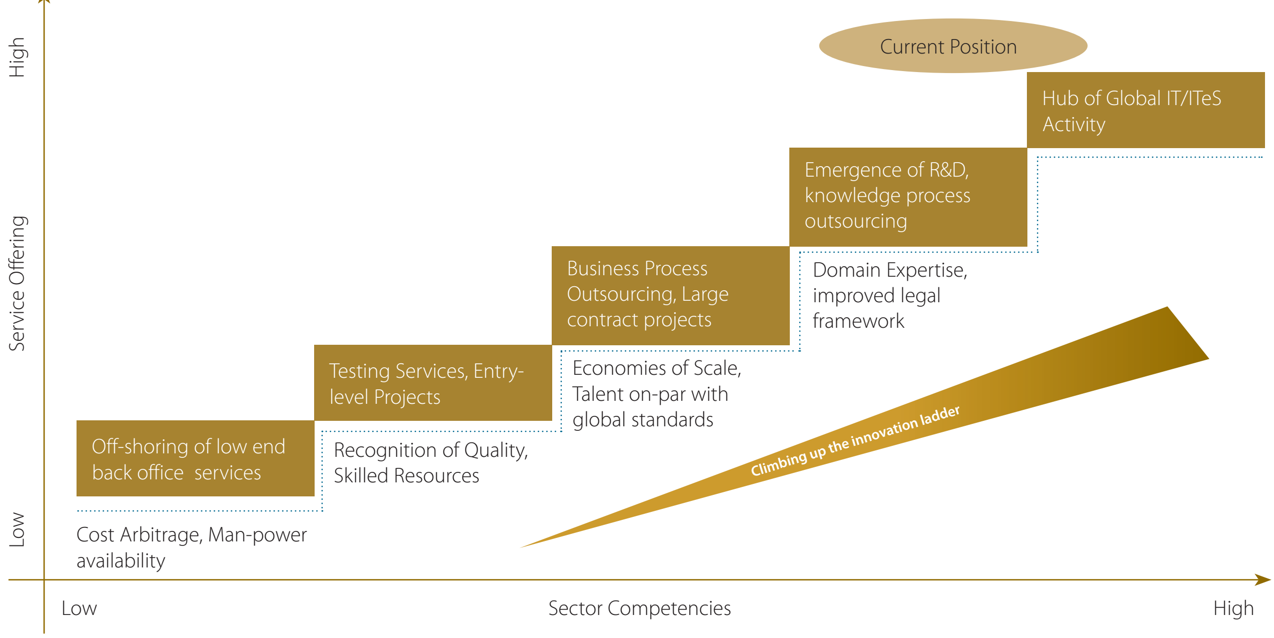
The industry players are also actively working on creating balance in the contribution of different geographies to their revenue in order to reduce their exposure towards a particular country and currency leading to a higher focus on the Europe and Asia Pacific region.

## FUTURE OUTLOOK: IT-ITES SECTOR

India, which was the off-shoring option of International players for lower-end back-room services has now emerged the global powerhouse for innovation and research. It is estimated that India will continue to attract substantive investment, with the cost-arbitrage factor continuing for another 20 years.

The flourishing ITeS sector would leverage the success of the IT industry, complementing the sector requirements and providing comprehensive service offerings.

IT-ITeS Sector: From the Back-end Services Location to the Global Innovation Hub



# Advantage India

India has strongly established its identity in the global sourcing market as one of the preferred destinations for outsourcing by playing on its strengths as a low cost destination with abundant availability of talent and an ecosystem that allows the industry to thrive and prosper. According to NASSCOM over 2001 – 2006, India's share in global sourcing has increased from 62 per cent to 65 per cent for IT services and from 39 per cent to 45 per cent for ITeS services.

The India value proposition has evolved considerably and demand is driven by key comparative advantages offered by India vis-à-vis other emerging outsourcing destinations.

| Value Proposition Offered by India |
|---|
| Breadth of service offering |
| Cost advantage |
| Ease of scalability |
| Quality and maturity of process |
| Global and 24/7 delivery capability |

## BREADTH OF SERVICE OFFERINGS

Increasing value addition and evolution of current service offerings are expected to be the critical success factors for future growth of the industry. The Industry players are aggressively investing on innovations and R&D in order to move up the value chain.

The global IT services market is large and India currently accounts for a very small pie of the overall technology spends. There is an ample opportunity for India and Indian third-party vendors to absorb a significant portion of the overall IT services market.

The breadth of service offerings by the Indian players allows for exploitation of the opportunities at different and higher points of the value chain. The Indian players have focused their energies on building domain competencies and expertise in order to ensure superior value addition to their client's outsourced projects and processes. Beyond the cost advantage the past year validated the success of the Indian outsourcing sector, where global multinational corporations firmly exhibited their faith in India amidst emergence and evaluation of various other low cost destinations.

## COST ADVANTAGE

Increasing pressure on bottom-line has led companies to focus on cost efficiencies. Improved cost of operations is the key factor driving the growth of the overall outsourcing story. India is one of the key outsourcing destinations, which offers significant cost savings. It is estimated that for multinational corporations sourcing from India, cost savings delivered are in the range of 25 to 60 per cent of the company's original costs. In comparison with the European Union ('EU'), the cost of employing an engineer is about 20 to 40 per cent of the costs in EU for the similar skill sets. Similarly, the sales, general and administrative expenses are about 80 per cent of the similar expenses in EU. And finally, the offshore billing rates are thereby about 50 to 70 per cent lower than that of the EU.

Apart from lower administration and labor costs, the central and state Governments offer fiscal and non-fiscal

| Financial Attractiveness of Top 5 Global Services Locations | |
|---|---|
| **Country** | **Index on a Scale of 4** |
| India | 3.22 |
| China | 2.93 |
| Malaysia | 2.84 |
| Thailand | 3.19 |
| Brazil | 2.64 |

Source: AT Kearney

incentives to industry players further adding to the cost advantage.

## EASE OF SCALABILITY

India is well positioned in most of the key parameters typically considered in making a decision towards outsourcing. Ease of scalability is expected to be one of the significant demand drivers in the future.

According to the data compiled in NASSCOM – McKinsey Report 2005, the Indian IT-ITeS industry is estimated to achieve US$ 60 billion of exports by 2008-09. This will generate an estimated additional demand of 850,000 IT professionals and nearly 1.4 million ITeS-BPO professionals.

**Indian IT Labor Supply: IT Software and Services**

| | 2006-07 | 2007-08 F |
|---|---|---|
| **Number of Engineering Graduates** | **501,000** | **536,000** |
| Degree (four year course) | 270,000 | 290,000 |
| Diploma & MCA (three year course) | 231,000 | 246,000 |
| **Number of IT (Computer Science, Electronics, Telecom) professionals** | **280,000** | **303,000** |
| Engineering IT graduates (degree) | 162,000 | 180,000 |
| Engineering IT graduates (diploma) | 118,000 | 123,000 |

Source: NASSCOM

With more than half of the current population at less than 25 years, India is well positioned to meet the swelling demand for IT-ITeS professionals. The country produces about 675,000 technical graduates every year of which about 400,000 are engineers. There are over 50,000 MBA candidates graduating in India each year. Industry stakeholders including individual firms, associations are undertaking initiatives to address issues concerning suitability of talent. Some of such initiatives include:

- National rollout of skill certification through NAC (NASSCOM Assessment of Competence)
- Setting up finishing schools in association with Ministry of Human Resources and Development to supplement graduate education

## QUALITY AND MATURITY OF PROCESS

Industry players are focused on achieving higher level of quality standards which is one of the key differentiating factors in dealing with competition. A majority of companies in India have already aligned their internal processes and practices to International standards such as ISO, CMM, and Six Sigma etc. which has helped in establishing India as a credible outsourcing destination.

Currently more than 50 per cent of the world's CMM Level 5 companies are based out of India. In addition, India is also very close to hosting the highest number of ISO companies in the world. This not only gives additional weightage to the credentials of the company, but also helps in attracting suitable workforce.

ITeS industry stakeholders recognise information security as a critical element of global service delivery. Individual firm's efforts are complemented by policy framework established by Indian authorities. Some of the initiatives include strengthening regulatory framework through proposed amendments, scaling up the cyber lab, and scaling up the National Skills Registry ('NSR').

## GLOBAL AND 24/7 DELIVERY CAPABILITY

In order to overcome the margin pressures, global multinational corporations need to take a closer look at offshore development options to reduce costs. The offshore development model enables companies to ensure increased productivity with a 24/7 operation model. With regards to this parameter, India offers a clear advantage over other 'on shore' or 'near shore' destinations.

## INFRASTRUCTURE

India's value proposition is complemented by the key infrastructure availability in the country. With initiatives like Software Technology Parks of India (STPI) and Special Economic Zones (SEZs) offered for cost-effective real estate availability, the Government is progressively working towards other capacity building measures.

### Telecommunications

The international internet connectivity infrastructure includes the bandwidth held by Indian International Long Distance Operators ('ILDOs') on their existing overseas cables and the satellite connectivity. The Department of Telecom has relaxed the existing conditions for sharing of infrastructure between domestic and international call centers. With this industry friendly policy change, any IT-ITeS companies with more than 50 seats are now allowed to use the same telecommunications infrastructure for both their domestic as well as international operations.

### Other Business Infrastructure

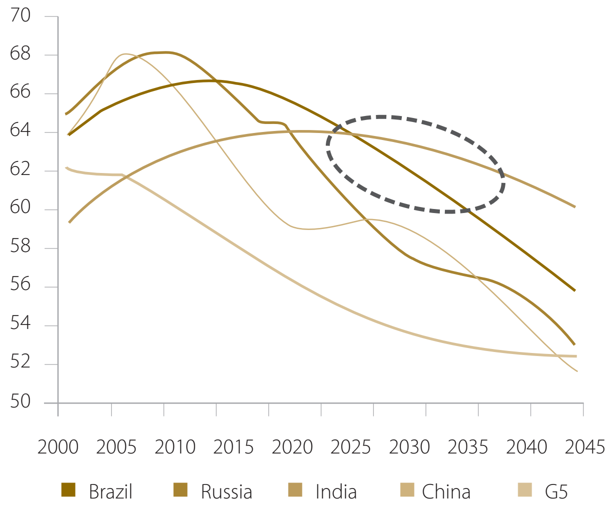
In addition to the telecommunications infrastructure, other sectors like real estate, transportation and hospitality are actively supporting the burgeoning demand generated by the IT-ITeS sector. Airport modernisation, national highway upgradation projects and various other infrastructure development projects are in the pipeline. While the demand is being largely met, there is a substantial need for improvement of infrastructure to support the long term needs of the industry.

## ATTRACTIVE DEMOGRAPHICS: A LONG-TERM ADVANTAGE

The chart illustrates India's human capital advantage over other BRIC countries.

As per NASSCOM Strategic Review report, India is one of the few countries to have an increasing share of working population. This is expected to remain so for the next couple of decades.

**Percentage of total population**




Source: NASSCOM

This is primarily due to the large base of young population and significant number of quality educational institutions.

## KEY OFFSHORING DESTINATION

India's share in the global market has increased by 3 per cent in the IT segment and by 6 per cent in ITeS over 2000-01 to 2005-06. India has maintained its position as the preferred outsourcing destination of the global IT-ITeS powerhouses in the most recent AT Kearney Survey. Indian IT-ITeS companies are now working with a global delivery model,

**Top 10 Outsourcing Destinations**

| Country | 2007 Rank | 2007 Score |
|---|---|---|
| **India** | **1** | **7.00** |
| China | 2 | 6.6 |
| Malaysia | 3 | 6.1 |
| Thailand | 4 | 6.0 |
| Brazil | 5 | 5.9 |
| Indonesia | 6 | 5.9 |
| Chile | 7 | 5.8 |
| Philippines | 8 | 5.8 |
| Bulgaria | 9 | 5.8 |
| Mexico | 10 | 5.7 |

Source: AT Kearney

on par with the highest global standards, apart from the continuing advantage of low costs, technical and language skills, abundant skilled pool, mature industry players and supportive government policies.

The attractiveness index is built on the following parameters:

- **Financial Competitiveness**
  - Compensation or salary costs
  - Infrastructure costs
  - Tax/regulatory costs
- **People**
  - Size and quality of BPO industry
  - Labor availability
  - Education
- **Environment**
  - Economic and political
  - Quality of infrastructure
  - Cultural exposure
  - Intellectual property protection

# Clusters in India

### WIDENING NATIONAL FOOTPRINT OF THE IT-ITES SECTOR

Based on the nature of services and location specific advantages, industry players have chosen different cities as headquarters for their operations. On the basis of export revenues, the city of Bangalore has emerged as the leader in the Indian IT-ITeS sector. Currently Bangalore has more than 1,700 companies registered with Software Technology Parks of India ('STPI') accounting for cumulative software exports of US$ 11 billion.

The Indian IT-ITeS industry is primarily concentrated in seven clusters of India i.e. Bangalore, Hyderabad, Mumbai, Pune, Delhi-National Capital Region, Chennai and Kolkata. These cities are preferred locations for companies looking to set up their IT-ITeS operations. These are the most established locations and have created an identity for themselves in the IT-ITeS industry both in the domestic and global business environment.

An analysis of the national footprint of leading IT-ITeS companies in India suggests that most of them have started their operations from Tier I cities. However in the last 3–5 years, reducing margins, escalating costs and high attrition rates are driving all major players towards exploring Tier II locations. Companies are moving to these alternative locations because of labor cost arbitrage, resource availability and risk mitigation by multi-location presence.

Tier II and Tier III cities are gaining importance in the IT-ITeS industry as these locations offer higher savings in administration maintenance costs, real estate and infrastructure costs, resource availability, and lower cost of living.

**Emerging IT-ITeS Hubs of India**

**Established IT/ITeS Hubs in India**

**NCR - Delhi**

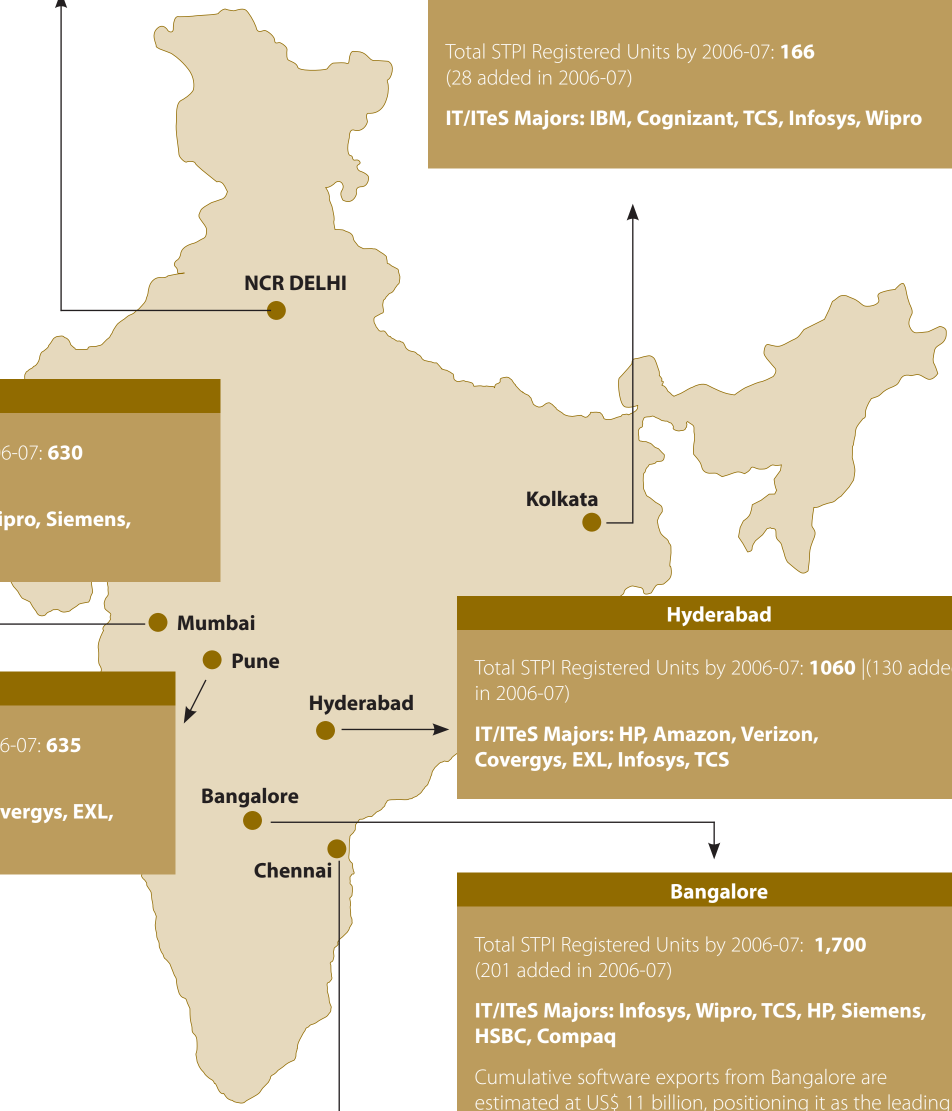
Total STPI Registered Units by 2006-07: **1400**
(150 added in 2006-07)

**IT/ITeS Majors: IBM, Genpact Oracle, American Express, Convergys, HP, General Motors**

**Kolkata**

Total STPI Registered Units by 2006-07: **166**
(28 added in 2006-07)

**IT/ITeS Majors: IBM, Cognizant, TCS, Infosys, Wipro**




**Mumbai**

Total STPI Registered Units by 2006-07: **630**
(40 added in 2006-07)

**IT/ITeS Majors: TCS, Infosys, Wipro, Siemens, Accenture**

**Pune**

Total STPI Registered Units by 2006-07: **635**
(108 added in 2006-07)

**IT/ITeS Majors: Cognizant, Convergys, EXL, KPIT, Msource**

**Hyderabad**

Total STPI Registered Units by 2006-07: **1060** |(130 added in 2006-07)

**IT/ITeS Majors: HP, Amazon, Verizon, Covergys, EXL, Infosys, TCS**

**Bangalore**

Total STPI Registered Units by 2006-07: **1,700**
(201 added in 2006-07)

**IT/ITeS Majors: Infosys, Wipro, TCS, HP, Siemens, HSBC, Compaq**

Cumulative software exports from Bangalore are estimated at US$ 11 billion, positioning it as the leading IT hub of India

**Chennai**

Total STPI Registered Units by 2006-07: **900**
(131 added in 2006-07)

**IT/ITeS Majors: Infosys, Wipro, Accenture, Cognizant**

# Policy Framework

IT-ITeS industry has been a focus area for the Government since its inception and through the various phases of its development and growth. The sector is an ideal example of the success an industry can achieve with optimal participation from all industry stakeholders. NASSCOM has played a significant role in the success of the industry by ensuring a platform for interaction and coordination between such stakeholders.

## FOREIGN TRADE POLICY

Most of the IT-ITeS products are freely exportable with the exception of a few items such as high power microwave tubes, high end super computer etc. The Export Promotion Capital Goods scheme (EPCG) allows import of capital goods on payment of 5 per cent customs duty.

The Special Economic Zones (SEZs) enable smooth and quick functioning of units set up for manufacturing and trading for export purposes.

The import of second hand computers including personal computers and laptops are restricted. However, second hand computers, laptops and computer peripherals including printer, plotter, scanner, monitor, keyboard etc. can be imported freely as donations subject to restrictions based on the nature of the beneficiary of such donations and also subject to the condition that the goods shall not be used for any commercial purposes and are non-transferable.

## FOREIGN DIRECT INVESTMENT ('FDI') POLICY FOR INFORMATION TECHNOLOGY

FDI upto 100 per cent is permitted for e-commerce activities subject to the condition that such companies would divest 26 per cent of their equity in favor of the Indian public in five years, if such companies are listed in other parts of the world. Such companies would engage only in business to business e-commerce and not in retail trading, inter alia, implying that existing restrictions on FDI in domestic trading would be applicable to e- commerce as well.

## EXPORT PROMOTION SCHEMES

Special schemes are available for setting up Export Oriented Units in the Electronics/IT sector. These schemes are:

- Export Oriented Unit ('EOU') Scheme
- Electronics Hardware Technology Park ('EHTP') Scheme
- Software Technology Park ('STP') Scheme
- Special Economic Zones ('SEZ') Scheme
  - Export promotion Capital Goods ('EPCG') Scheme
  - Duty Exemption and Remission Scheme

## EOU/EHTP/STP SCHEMES

The units undertaking to export their entire production of goods and services may be set up under the EOU, EHTP or STP Scheme for manufacture of goods, including repair, re-making, re-conditioning, re-engineering and rendering of services.

There are no limitations on the Foreign Direct Investment permitted through automatic route for the units set up under these schemes. EOU/EHTP/STP units may import from the Domestic Tariff Area ('DTA') or bonded warehouses in DTA without payment of duty, all types of goods, including capital goods required for its activities, provided they are not prohibited items of import. EOU/EHTP/STP unit shall be a positive net foreign exchange earner.

EOU/EHTP/STP units are permitted DTA access upto 50 per cent of the value of exports subject to fulfillment of positive Net Foreign Exchange ("NFE") on payment of concessional duties. Depreciation upto 100 per cent is permissible on computers and computer peripherals over a period of 5 years.

## EXPORT PROMOTION CAPITAL GOODS (EPCG) SCHEME

The EPCG Scheme allows import of capital goods for pre-production, production and post-production at 5 per cent customs duty subject to an export obligation equivalent to 8 times of duty saved on capital goods imported, to be fulfilled over a period of 8 years. Second hand capital goods without any restrictions on age may also be imported under the EPCG Scheme.

## DUTY EXEMPTION AND REMISSION SCHEMES

The duty exemption schemes enable duty free import of inputs required for export production. An Advance License is issued under Duty Exemption Scheme. A Duty Remission Scheme enables post export replenishment/remission of duty on inputs used in the export product. Duty remission schemes consist of Duty Free Replenishment Certificate ('DFRC') and Duty Entitlement Passbook Scheme ('DEPB'). DFRC permits duty free replenishment of inputs used in the export product. DEPB allows drawback of import charges on inputs used in the export products.

## ADVANCE LICENSE

An Advance License is issued to allow duty free import of inputs, which are physically incorporated in the export products. In addition, fuel, oil, energy, catalysts etc., which are consumed/ utilised in the course of their use to obtain the export products, may also be allowed under the scheme.

Duty free import of mandatory spares up to 10 per cent of the Cost Insurance and Freight ('CIF') value of the license, which are required to be exported/supplied with the resultant product, may also be allowed under Advance License.

## DUTY ENTITLEMENT PASS BOOK SCHEME (DEPB)

The objective of the DEPB is to neutralise the incidence of customs duty on the import content of the export product. The neutralisation shall be provided by way of grant of duty credit the export product.

Under the DEPB scheme, an exporter may apply for credit, as a specified percentage of Free on Board (FOB) value of exports, made in freely convertible currency.

## DUTY FREE REPLENISHMENT CERTIFICATE (DFRC)

DFRC is issued to a merchant exporter or manufacturer exporter for the import of inputs used in the manufacture of goods without payment of basic customs duty. However, such inputs shall be subject to the payment of additional customs duty equal to the excise duty at the time of import. DFRC shall be issued on a minimum value addition of 25 per cent only in respect of products covered notified by Directorate General of Foreign Trade ("DGFT").

## OVERVIEW OF SEMICONDUCTOR POLICY OF GOVERNMENT OF INDIA

The Government of India announced the Semiconductor Policy in February, 2007 to attract companies for setting up manufacturing units in India. The key highlights of this policy include:

- Government will bear 20 per cent of the capital expenditure for units located inside SEZs, and 25 per cent for those outside.
- Incentives will cover manufacturers of all semiconductors, displays including LCDs, organic light emitting diodes, plasma display panels and any other emerging displays, storage devices, solar cells; photo voltaics; other advanced micro and nanotechnology products;
- Incentive package would be available up to March 31, 2010

Government has proposed a minimum investment of US$ 610 million in case of semiconductor manufacturing (wafer fab) plants and US$ 244 million in case of ancillary plants. The Government's participation in the projects would be limited to 26 per cent of their equity portion. However, these incentives have not been extended to older plants with second-hand equipment.

# Key Trends

## VENDOR CONSOLIDATION – A SIGN OF MATURING MARKET STRUCTURE

Increasingly, large global multinationals are re-evaluating their basket of outsourced projects and processes and are looking towards consolidation of the same in order to manage them effectively. These corporations are outsourcing their global IT requirements to a limited number of vendors, who in turn, either execute it by themselves or manage it with assistance of third party service providers in the form of sub-contracted deals.

The trend is reflected in the Vodafone–IBM–EDS deal where Vodafone has outsourced its application development and maintenance services requirement to IBM and EDS. The deal value is estimated to be worth US$ 560 million per year. Vodafone expects to reap cost savings of about 25-30 per cent as an outcome of its decision to outsource the said requirements. The company plans to split the deal geographically between the two vendors.

## INCREASING IMPORTANCE OF EMERGING ECONOMIES

The emerging economies are making their presence felt in the technology sector not only as a potential outsourcing location but also as significant consumer markets. Primarily, the focus on the emerging economies has been as supply centers for the Information Technology requirements of the developed nations/ economies of the world. With the roots firmly trenched on the supply side, the buoyant economies of the emerging nations are now making their presence felt as demand centers as well. The BRIC countries' increase in the technology spends, mirrors the burgeoning market across these nations.

The global information technology players are also beginning to pay closer attention to the emerging markets. A case in point is the fact that IBM and HP India continue to win a larger share in terms of the number of outsourcing deals in the domestic Indian market.

## INCREASING ADOPTION AND ACCEPTANCE OF THE OFFSHORING CONCEPT

The offshoring concept witnessed early adoption by the United States and the geography contributes to bulk of India's export revenues from the offshoring deals, particularly in the BPO segment. The adoption of offshoring concept was still very limited amongst the Western European countries as compared to the United States. However, in the recent past these countries have matured in their socio-political attitude towards offshoring and are increasingly looking to develop a vendor base with 'on-shore', 'off-shore' and 'near-shore' delivery capabilities.

## MULTI-VENDOR CONTRACTS

The outsourcing deals signed in the recent times indicate a growing customer preference for multi-vendor contracts. The underlying objective is to mitigate the risks of outsourcing by distributing it across multiple vendors as against a single-vendor multi-year outsourcing deal. For instance, in 2005-06, 293 contracts were signed with transaction value greater than US$ 50 million; the maximum in the past five years. However, the total contract value continued to decline for large deals where the transaction value is greater than US$ 1 billion over the same period.

## EMERGENCE OF INDIAN IT MULTINATIONALS

In the process of developing and implementing the Global Delivery Model, the Indian IT-ITeS companies have expanded their global footprint in order to effectively deliver services catering to the diverse requirements of clients across the globe. Global companies now prefer to have the service delivery centers, particularly in the BPO segment, to be spread amongst multiple locations across key geographies.

The Indian IT-ITeS players have spread their roots accordingly, both by organic as well as inorganic growth strategies. Leading IT-ITeS players like Infosys for instance, have also undertaken initiatives to ensure a global mix even amongst its employee workforce. Infosys has initiated an internship program called “InStep” with the target of recruiting 125 interns each year from across the globe. In 2006-07, the company received about 12,000 applications and selected 125 of them representing 30 different nationalities.

Some of the Indian IT-ITeS companies have chosen the inorganic route for expanding their presence across the globe. Many Indian IT companies have acquired international entities in a bid to scale up onshore presence and increase geographical diversity. For instance, Wipro and TCS have closed more than 6 and 3 cross border deals respectively since October 2005. TCS acquired UK based Pearl Group’s BPO division and Comicron, a Chile based banking and pension funds BPO business, for strategic geographic presence and to bridge gaps in service offerings and domain expertise of the company.

## GLOBAL IT VENDORS FOCUS ON INDIA

Global vendors such as IBM, Accenture, EDS, IBM etc. are now incorporating the India story in their long term strategic plans and hence are increasingly investing further in building their offshore delivery capability.

The reason for including India in their growth story is tri-fold. One of them is the growing demand from most clients for their vendors to have a presence in India. Second is to exploit the India Advantage with respect to its value proposition and suitability as an offshoring destination. Finally, the presence of a large and growing domestic market is driving global IT-ITeS corporations towards exploring India’s market potential.

The employee workforce numbers have also grown significantly for all the IT multinational corporations in India. Accenture has a headcount of over 16,000 employees in India, IBM has the presence of over 39,000 employees and EDS has more than 15,000 employees in India. Cap Gemini has an employee workforce of over 4,000 employees and recently acquired Kanbay enabling a rapid ramp up of its presence in India.

The following are some of the proposed India investment commitments by leading multinationals:

- IBM to invest US$ 6 billion over 2005-06–2008-09
- Microsoft to invest US$ 1.7 billion over 2004-05–2008-09
- Cisco to invest US$ 1.1 billion over 2005-06 – 2008-09
- Intel to invest upto US$ 1 billion, including US$ 250 million in an India venture fund
- SAP to invest US$ 1 billion over 2005-06 – 2010-11 and increase its headcount to 8,000 in India
- Dell to invest US$ 30 million over 2005-06 – 2008-09

## INDUSTRY CONSOLIDATION AND INCREASING M&A ACTIVITY

The value of M&A deals struck in the IT sector touched US$ 2.4 billion in the first 10 months of 2005-06 as compared to US$ 1.3 billion in 2004-05. The number of outbound deals has increased substantially and even the size of the deals has increased substantially over the last two years.

The Indian IT-BPO sector has consistently attracted the highest levels of Private Equity (‘PE’) and Venture Capital (‘VC’) investments in the country. The total number of private equity deals in the IT-ITeS sector was 87 in 2005-06. In 2005-06, in terms of the volume of deals, the IT-ITeS sector accounted for more than 28 per cent of the VC/PE investments.

| Breakup of VC/PE Investment in 2006 (Volume) | |
|---|---|
| IT-BPO | 28% |
| BFSI | 18% |
| Manufacturing | 10% |
| Engineering and construction | 10% |
| Healthcare & life sciences | 8% |
| F&B and retail | 6% |
| Real Estate | 5% |
| Media | 4% |
| Others | 11% |

Source: NASSCOM

In terms of the value of deals, the IT-ITeS sector accounted for about 20 per cent of the VC/PE investments.

| Breakup of VC/PE Investments in 2006 (Value) | |
|---|---|
| IT-BPO | 20% |
| BFSI | 13% |
| Manufacturing | 13% |
| F&B and retail | 9% |
| Healthcare & life sciences | 8% |
| Engg. and Construction | 7% |
| Real estate | 3% |
| Media | 2% |
| Others | 25% |

**Source: NASSCOM**

Below are some of the recent PE and M&A deals in the IT-ITeS sector.

**PE and M&A deals in the IT-ITeS sector**

| Target | Acquirer/ Investor | Value in US$ million | Stake |
|---|---|---|---|
| Flextronics Software System | Kohlberg Kravis Roberts & co | 900 | 85% |
| Mphasis BFL Ltd | Electronics Data Systems Corporations | 398 | 52% |
| Syndesis | Subex Azure Ltd | 158 | 100% |
| Azure Solutions, UK | Subex Systems | 141 | 100% |
| eSys Technologies | Teledata Informatics | 141 | 51% |
| Hexaware Technologies | General Atlantic Partners | 68 | 15% |
| Enabler | Wipro Technologies | 55 | 100% |
| Saraware Oy | Wipro Technologies | 34 | 100% |
| Scandent Solutions Corporation Ltd | Indopark Holdings Ltd | 31 | 55% |
| BPM Inc | Firstsource Solutions Ltd | 30 | 100% |

## LARGE LONG TERM OFFSHORING CONTRACTS

Many of the big Indian IT-ITeS players have built strong credentials in executing and managing large global outsourcing deals. The bigger players are maintaining a strong momentum in their growth rates due to such large outsourcing deals coming their way. A single large contract is also being unbundled and distributed amongst the top companies in the globe.

For instance, British Telecom awarded a US$ 1 billion contract to Tech Mahindra. ABN AMRO awarded US$ 500 million five-year contract to TCS, Infosys and Patni Computer Systems. General Motors awarded a five-year US$ 300 million contract to Wipro, while TCS and Satyam together signed a 7 year contract worth US$ 145 million with Qantas airlines.

## GLOBAL TECHNOLOGY SPENDS

The global spends on technology and related services crossed US$ 1.5 trillion in 2005-06, which is a 7.7 per cent growth over the global technology spends in 2004-05. The figure below illustrates the growth in the different segments of the industry.

The IT Services market has grown by 5.9 per cent from US$ 444 billion in 2004-05 to US$ 470 billion in 2005-06. The Packaged Software segment has grown by 8.1 per cent from US$ 211 billion in 2004-05 to US$ 228 billion in 2005-06. The IT Services segment continues to be the more prominent segment contributing to more than 70 per cent of the total global technology spends.

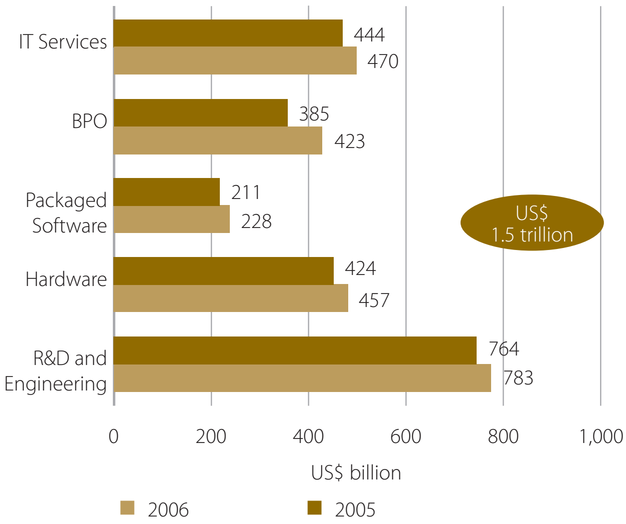
The hardware segment has grown by 5.9 per cent, from US$ 424 billion in 2004-05 to US$ 457 billion in 2005-06, driven primarily by economic growth in the emerging markets and developing economies around the globe.

The global spend on BPO was estimated at US$ 423 billion in 2005-06 from US$ 385 billion in 2004-05. The BPO segment has witnessed the highest growth rate across all the segments of technology spend. The BPO segment is currently evolving at a rapid pace with the maturity of service offerings in the segment increasing at a rapid pace accompanied by a spate of large outsourcing deals and consolidation in the market structure.

The principal driver behind the strong performance of the Technology sector globally is the use of information technology, e–commerce and automation as a means of increasing efficiencies, enhancing productivity, introducing new services and providing a customer centric sales and marketing experience.

While the US and Europe continue to drive a large chunk of the technology spends, the other emerging economies in Asia-Pacific, Africa and Middle East have witnessed

Global Technology Spend

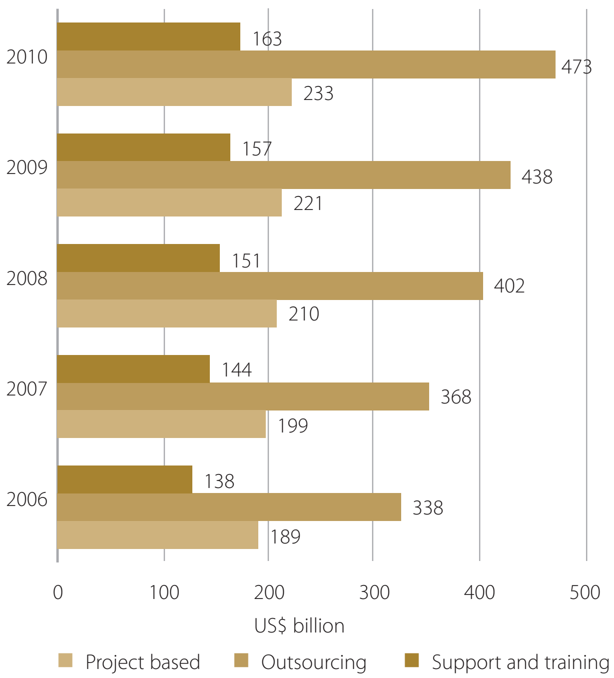



Source: IDC, NASSCOM

considerable increase in its technology spends. Driven by a buoyant economy, the region's technology related spends are primarily attributed to the growing domestic demand and the large scale capacity building measures undertaken by these regions.

As is traditionally the case, the Asia-Pacific, Middle East and the domestic Indian market itself, contribute to a very small percentage of global trends. These geographies however are also the fastest growing markets and are beginning to show the power of their large consumer bases. The case study of BRIC nation's technology spends is indicated below.

Worldwide Services Spending



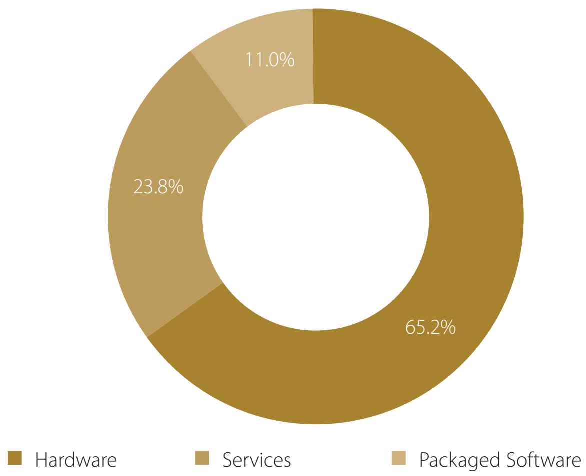

Source: IDC, NASSCOM

## BRIC SPENDING

Importance of emerging countries as both supply and demand centres is being recognised. Technology spends of Brazil, Russia, India and China (BRIC) together accounted for US$ 94.9 billion in 2006-07. Global multinational corporations are increasingly focusing on tapping opportunities in these markets.

The technology spends of the BRIC nations have shown considerable rise in the recent times. The BRIC spending on hardware has grown by about 14 per cent in the past year, while software spends have grown by 17 per cent and the services spending has increased by 18 per cent.

BRIC Spending in 2007




Source: IDC

## MID CAPS: GROWTH STORY

Mid-cap companies (US$ 50 million < Revenues < US$ 250 million) are growing at an aggressive pace, with well-defined firm-specific strategies rivaling large-cap credentials and capabilities in attracting clients and are emerging as key service providers for niche requirements.

Mid-cap companies are also following a strategy of exploring new markets to not only insulate themselves against over-dependence on the US market, but to also shield themselves from head-on competition with the large-caps.

**Mid-Caps: Building Market Competitiveness**

| Niche Service Providers | Multi-Domain Players | Consolidators | Solution Providers |
|---|---|---|---|
| • Focused on developing capability in a specific domain to compete with large-cap players<br>• Aztec, Hexaware | • Multi-domain capabilities across high growth verticals<br>• KPIT Cummins, Mastek, Zensar | • Growth through equal - sized mergers and significant acquisitions<br>• Scandent solutions (merged with SSI Tech) | • Growth through well-defined target product /solution segments<br>• Crane Software, Geodesic, Polaris |

These companies are increasing their focus on the domestic market, especially in emerging sectors such as retail, logistics, telecommunications and SMEs, with the domestic market expected to grow rapidly in the future. These companies are leveraging their outsourced testing services and Offshore Product Development (OPD) capabilities, with the Indian OPD market estimated to grow to US$ 8-11 billion by 2008.

# Key Players

## DOMINANCE OF THE TOP FIVE CLUB

The top five firms according to Dataquest rankings, by their 2006-07 revenues were Tata Consultancy Services, Wipro Technologies, Infosys Technologies, Hewlett-Packard India Sales, in that order. The top three positions were retained by Indian companies with the foreign players domestic revenues closely following suit.

The top five companies together added US$ 15,965 million to the Indian IT-ITeS industry estimated at US$ 55,336 million in 2006-07. The companies grew at a rate of 42 per cent in 2006-07 against an industry average of 32 per cent growth. The increasing rate of growth can be attributed to the companies diversifying into newer markets and attaining higher efficiencies. The top five companies employed 309,641 people, including their overseas employees count.

The industry exported US$ 37,499 million worth of software and services, up by about 35 per cent over 2005-06. Besides exports, the domestic demand was also a key driver for the growth of the companies. The impressive growth rate of 42 per cent for the top-five club came primarily on the back of strong gains for TCS and Infosys.

**Top 10 Indian IT-ITeS Firms ( By Revenue)**

| | |
|---|---|
| 1 | Tata Consultancy Services |
| 2 | Infosys Technologies Ltd. |
| 3 | Wipro Technologies Ltd. |
| 4 | Satyam Computer Services Ltd. |
| 5 | HCL Technologies Ltd. |
| 6 | Tech Mahindra Ltd. |
| 7 | Patni Computer Systems Ltd. |
| 8 | I-flex Solutions Ltd. |
| 9 | L&T InfoTech Ltd. |
| 10 | Polaris Software Lab Ltd. |

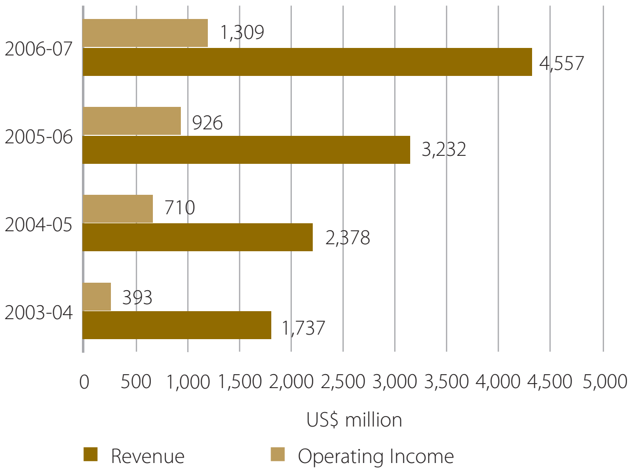
Source: NASSCOM

| | Revenue | Key Characteristics – Business Model |
|---|---|---|
| Large Cap | Rev > US$ 250 million | • Mainly concentrated on ADM, Package Implementation, BPO and Consulting<br>• Well positioned to bag large IT contracts<br>• Strong delivery capabilities across multiple verticals<br>• Low client concentration<br>• Compete with global IT vendors such as Accenture, IBM, EDS, Cap Gemini |
| Mid Cap | Rev > US$ 50 million but < 250 million | • Mainly concentrated on generic IT services and BPO offerings<br>• Scale and margin pressures<br>• Increasing competition within the Mid Cap players as well as with the Large Cap IT players |
| Niche players | Focused on key niche areas of operations | • Focused on developing capabilities around a specific niche domain and aspire to be leaders in that domain<br>• Scale and growth pressures; Limited growth available in specific niche areas<br>• High client concentration<br>• Threat from Large Cap/ Middle Cap entering the niche areas |

## TATA CONSULTANCY SERVICES

Tata Consultancy Services (TCS) is a leading Indian IT company with a workforce of over 85,000 professionals spread across more than 50 global delivery centers. Its clients include seven out of the top ten corporations in the Fortune 500 list of the largest corporations in the United States.

The company registered revenues of US$ 4,557 million in 2006-07 from its IT and related operations. The company recorded a 41 per cent growth over comparable revenues of US$ 3,232 million in 2005-06. The profitability for the year was at 22 per cent of revenues.




Source: TCS

With 85,582 associates from 67 nationalities, the company is emerging as a truly global firm with a diverse employee base. This Heterogeneous base is central to sustaining the company's competitive edge. At the end of the year, the number of non-Indian nationals working for the company was 9.6 per cent of a total employee base of 85,582.

The contribution of Americas and India to the company's revenue has marginally decreased between 2003-04 and 2006-07, while the share of Europe and UK has grown over the said years.

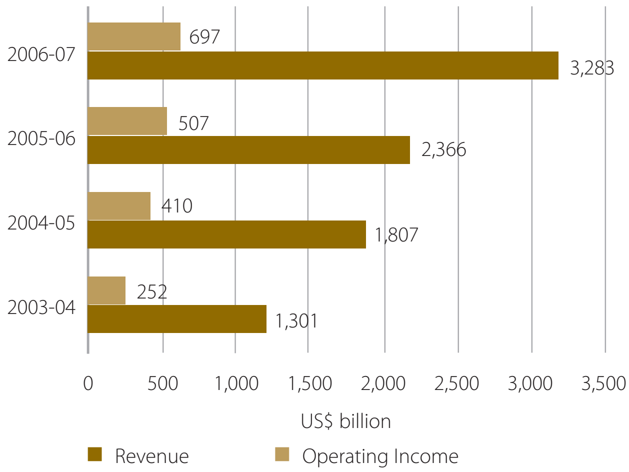
**Key Highlights**

| |
|---|
| Acquired FNS bringing core banking solutions expertise |
| Comicron acquisition brought in BPO expertise in South America |
| Pearl Group JV made in the life insurance and pensions industry in the UK |
| Tata Technologies acquisition of UK-based INCAT Technologies for US$ 98 million complemented its engineering and design services expertise |

The BFSI vertical contributed to about 43.89 per cent of the company's revenues in line with the sector trends.

## WIPRO TECHNOLOGIES

Wipro is one of the leading IT solutions and service providers in application development, system integration, product implementation and consulting services. Wipro's diversified businesses include software development, hardware, consumer care and lighting, and health science. The company began its swift transformation from a predominantly hardware company to a software services company in 1998-99.




Source: Wipro

The company registered revenues of US$ 3,283 million in 2006-07 from its IT and related operations. The company recorded a 41 per cent growth over comparable revenues of US$ 2,366 million in 2005-06. The profitability for the year was at 21 per cent of revenues.

The company operates 36 development centers across the globe. The employee strength of the company stood at 67,818 employees in March 2007, which is a 26 per cent growth over 2005-06. The attrition rate stood at 17.4 per cent for 2006-07 compared to 14.6 per cent for the previous year. The increase in attrition was in line with industry wide trends owing to increasing demand for skilled talent.

The revenue from Americas and Europe has marginally decreased while there is a gradual increase in the Indian share of the revenues. The revenue for 2006-07 with respect to industry verticals is categorised as Product and Energy Services at 28 per cent, Financial Services at 23 per cent, Technology, Media and Transportation services at 12 per

**Key Highlights**

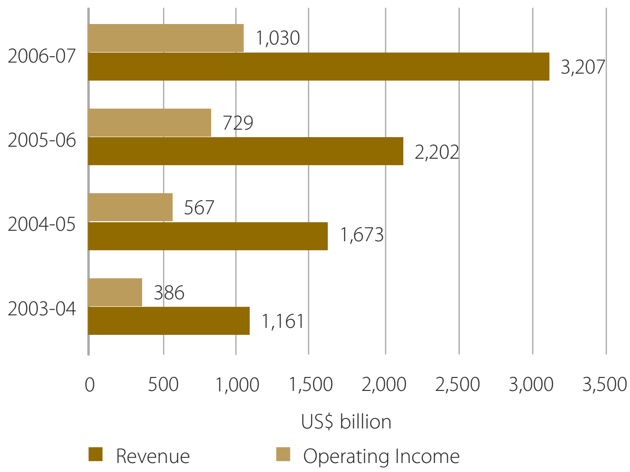
| |
|---|
| Acquisitions plus big 'total outsourcing' wins in the domestic market against global competition |
| Employee strength in global IT business crossed 50,000 |
| The product engineering services business – a key differentiator crossed a half-billion dollars as did revenues from Europe |

cent, Retail at 10 per cent, Energy and Utilities at 9 per cent, Manufacturing at 9 per cent, Telecommunications at 7 per cent and other verticals at 2 per cent.

## INFOSYS TECHNOLOGIES LTD.

Infosys Technologies Ltd. is India's second largest software and services company and is recognised globally for its world class management and corporate governance practices. The company is believed to be one of the pioneers in the development and adoption of the now famous 'Global Delivery Model'.

The company registered revenues of US$ 3,207 million in 2006-07 which is a 45.65 per cent growth over US$ 2,202 million in 2005-06. The revenue from software exports constituted 98.4 per cent of the revenues in 2006-07. The profitability after tax was at 29 per cent of revenues.




Source: Infosys

The company operates 44 software development centers globally of which 24 are located in India. The company employed 72,241 employees at the end of March 2007, which is a 37 per cent growth over 2005-06. The attrition rate for 2006-07 was at 13.7 per cent as compared to 11.2 per cent in the previous year.

The revenue for 2006-07 with respect to the geographies is categorised as North America at 63.3 per cent, Europe at 26.4 per cent, India at 1.6 per cent and rest of the world at 8.7 per cent. The revenue share of America has decreased from 73 per cent in 2003 to 63 per cent in 2006-07, while the share of Europe has grown from 17 per cent in 2002-03 to 26 per cent in 2006-07.

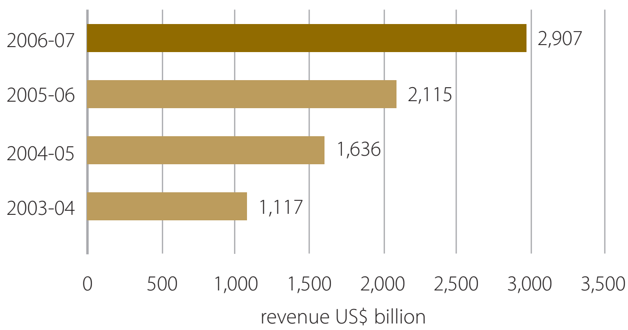
**Key Highlights**

| |
|---|
| Revenues crossed US$ 2 billion and the company continues its focus on continuous employee training and progression on the IT value chain |
| "One Infy" service, an initiative to combine different service offerings and go to market strategy for its top 30 clients, helped bring in five large banking orders. |
| One client contributed over US$ 200 million, three clients contributed over US$ 100 million each, 12 clients contributed over US$ 50 million each and the company gears for more such large contracts. |
| The company has initiated various projects like Instep, Catch Them Young to attract talent globally and at the schooling level. |
| The company's training center in Mysore, Karnataka is acclaimed as the world's largest corporate university and by December 2007 can train 13,500 employees at a time. |

The revenue for 2006-07 with respect to industry verticals is categorised as Banking, Financial Services and Insurance at 37.45 per cent, Manufacturing at 13.5 per cent, Telecommunications at 19.2 per cent, Retail at 10 per cent and other verticals at 19.8 per cent.

## HEWLETT-PACKARD INDIA

HP India was the world's largest IT company in 2006-07 with revenues of US$ 97 billion. HP India employs approximately one fifth of its global workforce (156,000) in India. HP Labs in Bengaluru is one of the five global laboratories of HP involved in high-end research and development operations.




Source: Dataquest

The total revenue from HP's businesses in India was valued at US$ 2,907 million in 2006-07 and this included India sales (US$ 2,357 million), Application Services (US$ 454 million), BPO (US$ 115 million) and Engineering Services (US$ 96 million). The IT revenues (excluding BPO) grew by 37 per cent over 2005-06.

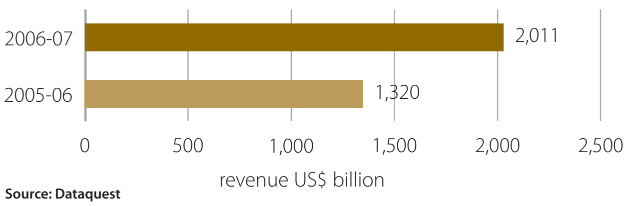
**Key Highlights**

| |
|---|
| Domestic market contributed to 81 per cent of HP India's IT revenues in 2006-07 while the rest was through exports. The percentage contribution from exports has marginally decreased over the years owing to the increasing IT spend of Indian market |
| HP is primarily a product company with market monopoly in printers and a strong presence in segment of PCs, notebooks, and servers. |

HP India employed approximately 29,000 people in its various business divisions. The segmentation of revenue through India sales (US$ 2,357 million) is categorised as BFSI at 19 per cent, Home at 18 per cent, Government at 16 per cent, Telecommunications at 16 per cent, Manufacturing at 12 per cent and other verticals at 19 per cent.

## IBM INDIA

IBM's business in India has shown an aggressive growth rate, with steep rise on the headcount and the domestic revenues. IBM India houses one-sixth of its global talent pool and is expanding rapidly.




Source: Dataquest

Total revenue from IBM's businesses in India was valued at US$ 2,011 million for 2006-07, a 52 per cent growth over 2005-06. IBM India's revenue grew impressively compared to other major emerging markets, including the BRIC countries. There was an all round growth of revenues in various businesses of IBM India.

**Key Highlights**

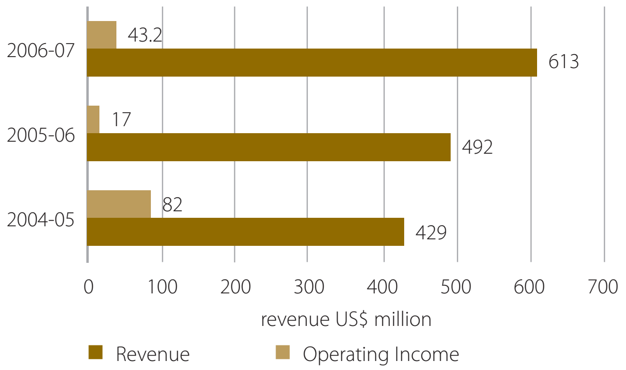
| |
|---|
| IBM announced that it would be investing US$ 6 billion in India over the next three years and plans to tap the vast domestic market |
| IBM entered into a major outsourcing deal with DLF in 2006-07 |
| Bharti and Idea Cellular outsourcing deals bagged by IBM are prime drivers of the telecom vertical revenues. |

IBM India employed a workforce of 55,000, which was almost one-sixth of its global workforce of 355,766 employees in 2006-07. IBM India's headcount grew by 34 per cent from 41,000 in 2005-06.

IBM India registered 50 per cent growth in Telecommunications revenues, 35 per cent growth in both Financial Services and Small and Medium Business (SMB) respectively over 2005-06.

## GENPACT

Genpact, headquartered in India, is one of the pioneers in the outsourcing world. Erstwhile known as 'Gecis', GE sold its stake in this BPO company and was subsequently named Genpact. In 2005-06, Genpact added 20 new clients and the company managed to reduce its dependence on GE business from 95 per cent in 2004-05 to 75 per cent in 2006-07.




Source: Genpact

The company registered revenues of US$ 613 million in 2006-07, which is a 24.6 per cent growth over 2005-06. The company targets its US$ 1 billion annual revenue mark by 2007-08.

Genpact's global workforce consisted of 28,000 employees in 2006-07. The company has over 25 operation centers across the globe including US, Mexico, London, Spain etc, with the most recent center being established in Romania. There are over 5,500 Six Sigma trained green belt employees with Genpact. The average employee hiring rate is over 1,000 employees per month partly attributable to high attrition rates.

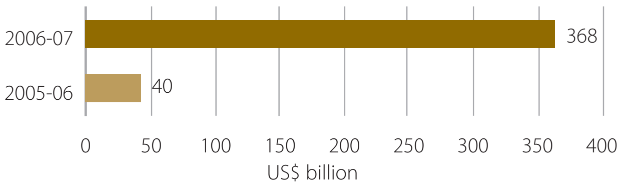
**Key Highlights**

| |
|---|
| Genpact was named the "No.1 ITeS-BPO Company" by NASSCOM in 2006-07 |
| The company recently tied up with NDTV for its foray into media outsourcing |
| It won a US$ 60 million contract from Linde Group, Germany and a seven year contract from Wachovia to support its business process outsourcing efforts from India |
| Genpact University, a project initiated for employees interested in pursuing higher education while on the job, has tied up with premier institutes like IIM Bangalore and XLRI |

The major industry verticals which contribute to the revenue are BFSI and Manufacturing. The other industry verticals include Travel, IT products and services and Media and Entertainment.

## TRANSWORKS

TransWorks is a fully owned subsidiary of the Aditya Birla Nuvo (part of the Aditya Birla Group). TransWorks acquired Minacs, largest BPO firm in Canada in 2005-06. This acquisition propelled an 826 per cent growth over 2005-06 and positioned TransWorks as one of the leading service providers in India.




**Source: Dataquest**

The company registered revenues of US$ 368 million in 2006-07, which is an 826 per cent growth over revenues of US$ 40 million in 2005-06. TransWorks added 50 new clients over 2006-07.

TransWorks' global workforce consisted of over 9,978 employees in 2006-07, which is a 275 per cent increase over 3,630 employees in 2005-06. TransWorks has its facilities in 7 centers across the globe including India, Canada, United States, United Kingdom, Germany and Hungary.

The revenues in 2006-07 with respect to industry verticals is categorised as Automotive at 56 per cent, Financial Services at 18 per cent, Technology and Telecommunications at 16 per cent and other verticals at 10 per cent. With the acquisition of Minacs, Transworks diversified into verticals where it did not have a presence earlier.

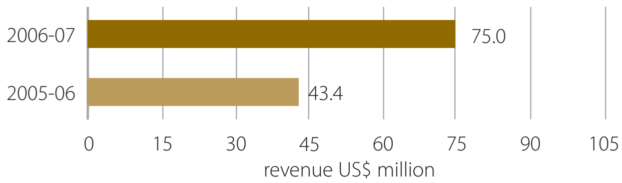
**Key Highlights**

| |
|---|
| Minacs acquisition added thirty delivery locations and operations in six countries across the globe |
| TransWorks has existing practices in F&A, document management, HR administration, and procurement & logistics and has plans to ramp up its non-voice services |
| 34 per cent of the current revenues are from non-voice services, the highest for any India-based BPO |
| One of the latest services offered by TransWorks is "Inbound Email Response" which facilitates companies in reducing response time and realise cost savings |

The revenues in 2006-07 with respect to service lines is categorized as Customer Interaction Services at 66 per cent, Procurement and Logistics at 18 per cent, Integrated Marketing at 9 per cent, Document Management at 2 per cent and other service lines at 5 per cent.

## IBM DAKSH

IBM corporation acquired Daksh e-Services in the month of April, 2004 and it was renamed IBM Daksh.




**Source: Dataquest**

The company registered revenues of US$ 307 million in 2006-07, which is a 72 per cent growth over revenues of US$ 178 million in 2005-06.

**Key Highlights**

| |
|---|
| IBM Daksh, in collaboration with IBM Research Labs is developing a tool 'Sensi', a voice and accent training software that will increase training effectiveness and shorten evaluation time |
| Runs zero-fault service operations for global firms |
| Plans evolved from a BPO to Business Transformation Outsourcing unit |

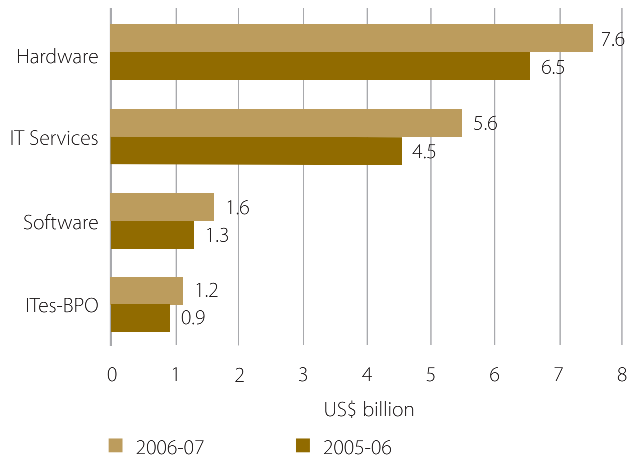
IBM Daksh's global workforce consisted of over 22,000 employees in 2006-07, which is a 22 per cent increase over 18,000 employees in 2005-06. IBM Daksh has 14 service delivery centers in India and the Philippines. The attrition rates were close to 60 per cent in 2005-06.

# Key Opportunities

## EMERGING DOMESTIC MARKET

Though the growth of Indian IT-ITeS revenues continue to be driven by the exports turnover the domestic market for IT-ITeS sector has evolved and matured particularly so over the last three years. The overall size of the domestic market grew from US$ 10.2 billion in 2004-05 to US$ 13.2 billion in 2005-06. The revenues for 2006-07 were estimated at US$ 15.9 billion, an increase of 20.4 per cent over 2005-06

Domestic Market




Source: NASSCOM

The liberalisation of Indian economic policy and the deregulation of key sectors have led to a large degree of exposure to the global best practices and standards translating into increased adoption of automated processes and end-to-end information technology systems to support them. The participation of global multinational corporations in domestic businesses have eased and driven IT adoption in order to enable efficient delivery of services in a highly competitive environment. The verticals such as banking and telecom are the ideal examples of the demand generated by such deregulated sectors.

With increasing adoption of Information Technology in India, domestic IT services spends grew by about 28 per cent to reach US$ 4.5 billion in 2005-06. While custom software development still remains the core of the domestic demand for IT services, the managed services segment, IT consulting segment and the application management segment also saw significant growth in 2005-06. This is also a sign of the increasing maturity of the domestic market. The domestic market for IT Services in India primarily began with basic services such as maintenance, network management, facilities management etc. However, the market is now showing signs of maturity with larger deals coming through for services such as IT Consulting and IT Outsourcing. A classic example is the IBM – Bharti deal where the deal also involves pricing dependant on the value addition done by IBM by way of provision of the services.

In addition, Government spends on capacity building is the most important emerging vertical for domestic IT spending. Several large e-governance initiatives launched by the government under the National E-Governance Plan are expected to generate sustained growth in domestic spending for IT services. The continued emphasis on e-governance is viewed to provide substantial opportunities for the Indian IT industry in the long term. This is also in line with the trends across the globe particularly in Asia-Pacific where the Governments are increasing their IT spends to link all Government agencies, provide online services to citizens and corporate and finally to allow a free flow of information.

The demand for BPO services has also increased considerably. Increasing competition and other business pressures are driving organisations towards the realisation that they would rather spend their time and resources efficiently towards the core operations and outsource the non-core operations to third party vendors. One of the large deals in domestic BPO outsourcing segment was the

Air-India contract for outsourcing of its domestic customer service operations to a third party vendor.

The Banking, Financial Services and Insurance; manufacturing; and telecommunications are the key verticals driving growth in the domestic market for IT and ITeS. Verticals such as education, healthcare, retail and consumer durables are the other emerging areas expected to drive growth in domestic demand. Domestic revenues are moving beyond hardware spends, with IT-ITeS spend estimated to overtake the hardware spend in 2006-07.

**Prominent Domestic ITeS Deals in 2005-06**

| Vendor-Client | Engagement Type |
|---|---|
| MphasiS BPO-State Bank of India | Voice based customer support operations |
| Nortel & IBM Daksh & MphasiS & HTMT & Teletech – Bharti Tele Ventures | Call center services (A US$ 244 million deal) |
| Infovision-Whirlpool | Customer support activities |
| Spanco Tele-Air India | In-bound customer service |
| Dialnet Communications Ltd-Star Plus | IVR Platform based services |
| Customer First-Apollo Hospitals | Customer support activities |

**Prominent Domestic IT Services Deals in 2005-06**

| Vendor-Client | Engagement Type |
|---|---|
| TCS-Central Bank of India | System Integration |
| Wipro-Ashok Leyland | IT Consulting |
| HCL-Bangalore Development Authority | Application Development |
| IBM-Bharti | End-to-End IT Outsourcing |
| Wipro-YES Bank | End-to-End IT Outsourcing |
| HP-Bank of India | End-to-End IT Outsourcing |

Source: IDC-NASSCOM IT Report 2006

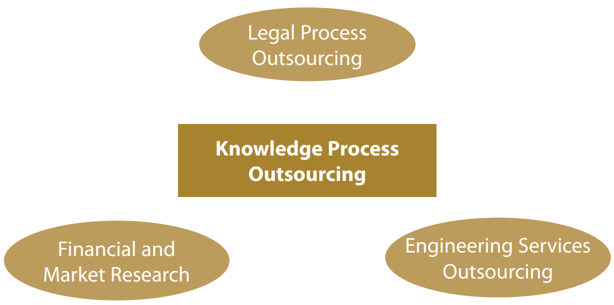
## KNOWLEDGE PROCESS OUTSOURCING

The genesis of Knowledge Process Outsourcing (KPO) followed BPO services in India. While the value proposition for the BPO industry lies in the cost advantage and process efficiencies arising out of a third party vendor's scale and scope of process outsourcing services; the value proposition for KPO additionally requires the availability of a talent pool with sufficient domain knowledge and experience.

According to NASSCOM estimates, the KPO industry is expected to generate revenues of US$ 17 billion in 2009-10 of which India is expected to gather a market share of about 65-70 per cent of the revenues, translating to circa US$ 12 billion worth opportunity. The industry is expected to employ about 250,000 professionals by 2009-10.
Some of the KPO services already outsourced to India include services such as data analytics, content management, research and information services, animation, biotech and pharmaceutical research, medical and health services.

The data analytics opportunities are already witnessing high growth levels in the customer relationship management and market research services segment. There are third party vendors such as Genpact and Evalueserve which have already developed a significant analytics practice. Many multinational corporations have also set up their third party captive units for data collection, data management, analytics and modeling and business intelligence requirements.

According to CRISIL research, the global market research and analytics segment is estimated to be about US$ 60 billion. The offshorable component of the same is estimated to be about US$ 25 to 30 billion. Further, the Indian KPO industry is estimated to cater to about 50 per cent of the global industry demand.




The growth drivers for this industry are expected to be the labor cost-arbitrage advantage, the availability, suitability and productivity of skilled talent pool, India's strong and established presence in the outsourcing industry and growing adoption of KPO by Small and Medium Enterprises (SMEs).

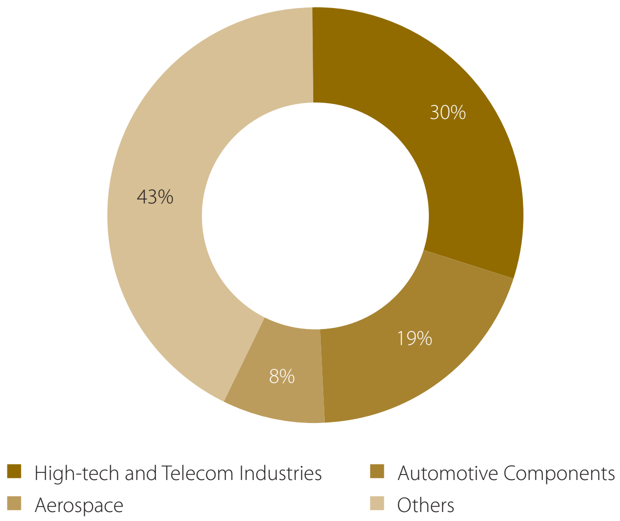
## R&D AND ENGINEERING SERVICES OUTSOURCING

The Indian export revenues from R&D and engineering services have reached US$ 4 billion in 2005-06 and are estimated to reach US$ 4.9 billion by 2006-07. The overall growth in this space is estimated to be about 30 per cent year on year. Global engineering services spend is estimated at US$ 750 billion which is expected to increase to more than US$ 1 trillion by 2020. India's share is estimated at US$ 1.5 billion of the US$ 10-15 billion outsourced services in 2005-06 and is predicted to garner a share of about US$ 50 billion by 2020.

Over 200 product-based multinational companies are known to be sourcing part of their product development requirements from their captive offshore centers in India or from third party vendors in the country. Increasing business pressures, shorter lead times, and increasing complexity of products is further expected to drive the growth of offshore product development services.

Range of services outsourced includes engineering and designing solutions across diverse industry verticals like telecommunications, automotive, construction, aerospace, utilities and industrial design and research and development divisions of the leading high-tech companies.

**Engineering Services Outsourcing Verticals**




Source: EY-IACC Global Offshore Outsourcing Summit 2006

Bechtel, General Motors, Ford, John Deere, Caterpillar, Silicon Automation Systems, John Brown Engineering are a few global giants that have set up their engineering services divisions in India, taking advantage of the 60 per cent labor-cost arbitrage in this sector. The captive centers of multinational corporations such as Cisco Systems, Intel, IBM and GE have filed about 1,000 US patent applications, while Texas Instruments has about 225 patents attributable to its Indian operations.

TCS, HCL Technologies, and Satyam are the top three players in this segment. HCL Technologies had revenues of US$ 260 million in 2005-06 from its Engineering and design services segment, a growth of about 40 per cent over previous year. For TCS, the revenues from the segment have seen an increase of 62 per cent to US$ 229 million in 2005-06. TCS's headcount in this segment was 1,600 at the end of 2005-06 and is estimated to be at about 2,000 by the end of 2006-07.

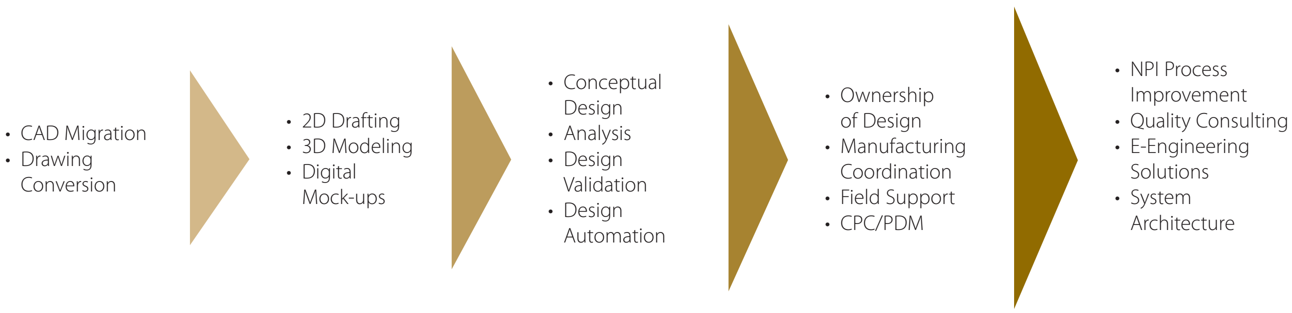
## LEGAL PROCESS AND IP RESEARCH OUTSOURCING

Outsourcing of Legal and IP research is presently at a nascent stage with tremendous potential for growth and service providers have merely scratched the surface on this opportunity. India offers the advantage of employing full-time legal professionals, resulting in higher efficiencies, compared to the temporary paralegals employed overseas for a large quantum of work.

India offers impressive scalability advantage with large pool of legal professionals ( over 1 million lawyers and over 70,000 law graduates passing out every year) and cost arbitrage, with Indian lawyers billing one-tenth of their US counterparts (US$ 40-60 compared to US$ 350 per hour)

While most of the business presently comes from

**Migration of Engineering Services from the Low-end Designing to Complete Product Designing**

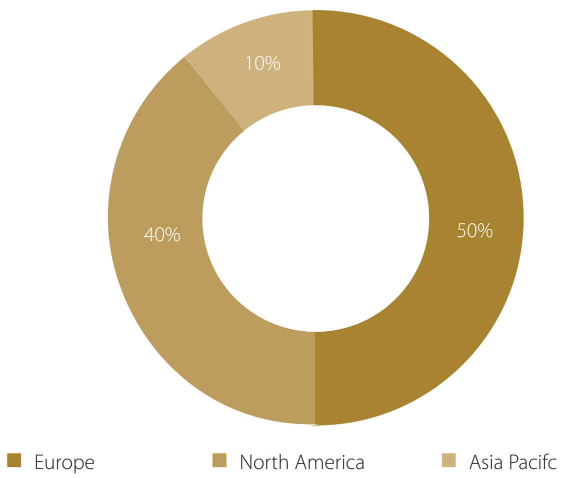


| Migration of Legal and IP Services from Low Value Addition to Creative Services | | | |
|---|---|---|---|
| **Legal Content Services** | **Legal Documentation and Analysis (non-litigation)** | **Legal Documentation and Analysis (litigation)** | **Intellectual Property Rights** |
| • Updating, Summarising, Annotating<br>• Managing Content | • Contract Drafting<br>• Due Diligence<br>• Contract Review<br>• Preparation of Model Contracts<br>• Management and Maintenance of Contracts<br>• Management of Compliance | • Research and Evidencing for Litigations<br>• Drafting of Legal Notices<br>• Analysis of Case Laws<br>• Review of Court Orders<br>• Docketing<br>• Managing Case Papers | • Research on Potential Areas for Product Development<br>• Patent Research<br>• Patent Documents Drafting<br>• Identification of Patentability and infringement<br>• Prior Art Searches<br>• IP Asset Management |

the USA, there is huge untapped opportunity in Europe (especially UK), Canada and Australia. Firms like SDD Global Solutions, JuriMatrix, Integreon, Pangea3, RR Donnelly are mushrooming with increasing venture capital investment, tapping the vast market opportunities

## FINANCIAL AND MARKET RESEARCH

**Revenue by Geography**




Source: EY-IACC Global Offshore Outsourcing Summit 2006

Captive research centers are being set up by leading global investment banks, foreign banks and consulting firms, as well as several third-party service providers and leading BPO players.

Majority of demand comes from companies headquartered in USA, UK, Germany, and Asian countries such as Japan, Korea and Singapore. However, it is estimated that the BRIC countries would increase their share considerably over the coming years.

India has emerged the choice destination for front-end research and analysis divisions, migrating from the back-room services off-shoring. Captive centers are being set up by McKinsey (for business and financial research) and General Electric (for financial research). Leading third-party service providers have reported growth of 100 per cent or more per annum over the past 4-5 years. The Big Four of Accountancy and Professional Services firms- Ernst & Young, Deloitte, PWC, and KPMG have their presence in India along with other leading firms like Datamonitor, Standard & Poor.

| Spectrum of Offerings | | |
|---|---|---|
| **Business Research** | **Financial Research** | **Market Research** |
| • Industry Research<br>• Company Research<br>• Situation Analysis<br>• Database Building | • Equity Research<br>• Company Research<br>• Credit Analysis<br>• Instrument Analysis<br>• Portfolio Valuation<br>• Financial Modeling<br>• Comparable Valuation Analysis | • Market Research and Analysis<br>• Market Segmentation<br>• Secondary Research and Surveys<br>• Forecasting through Predictive Modeling<br>• Data Analytics |

## TESTING SERVICES OUTSOURCING

The market for offshore testing services is expected to grow at a rapid rate and is believed to be the next big opportunity for the Indian IT players. According to Gartner estimates, the global market for testing services is expected to reach US$ 13 billion in 2009-10 with about 45 per cent of the same projected to be outsourced to vendors.

A few key Indian players in the industry have already dedicated their efforts towards ensuring exploitation of the opportunity on the horizon. The Indian exports revenue from software testing services was about US$ 282 million in 2005-06 and estimated to be about US$ 385 billion in 2006-07. The leading players achieve about 7-10 per cent of their revenues from their testing services units. For instance, Infosys Technologies Ltd, one of the leading IT-ITeS players derived about 7 per cent of its revenues in 2006-07 from its software testing services unit. Wipro, also one of the top five IT-ITeS players in India derived about 9 per cent of its global IT services revenues from its testing service line.

With the technology moving towards Service Oriented Architecture, functional testing of software and applications has taken on a new dimension and has become more complex and critical as well. Further, with release cycles of software products shrinking and the complexity of requirements increasing, quality assurance and software testing is proving to be a bottleneck for product companies across the globe. Outsourcing of the testing services requirements enables the product companies to focus on building features and functionalities in their products and subsequently on fixing the identified defects.

In order to truly capitalise on the opportunity, Indian players would need to focus on and develop the solutions and product offerings in its software testing services business. The players also need to build and upgrade their testing tools in line with the business and technology requirements of its clients.

## SOFTWARE PRODUCTS

The potential and capability of India in this segment was long identified and exploited by multinational product companies that set up their captive units in India as a part of their process value chain for product development.

The Indian software products segment presently forms a very small percentage of the overall Indian IT-ITeS industry. However, there are several large and small niche players in the country that have been developing and marketing indigenous software products which have been deployed both in the domestic as well as international markets. The export revenues from this segment have grown from US$ 340 million in 2004-05 to US$ 400 million in 2005-06. NASSCOM estimates the revenues from this segment to reach US$ 450 million in 2006-07.

Dataquest estimates that there are about 75 large to medium sized product companies in India that have both organically as well as inorganically built their credentials in the software products segment of the industry. While most of these companies primarily began with focus on the domestic market for ease of brand building and marketing, bulk of India's software product revenues come from product exports.

The three biggest players in this segment are Infosys, I-Flex and TCS. Infosys's flagship software product brand 'Finacle', primarily had its revenues from the segment biased in favour of the domestic market. It, however, reversed the trend in 2005-06 with critical wins in the international market. TCS's banking solution products, with its wins in the form of deals with SBI, Allahabad Bank, Citibank and ABN AMRO trenched its roots strongly in the domestic market. A strategic acquisition in the form of FNS, a Sydney based core banking solution vendor, enabled TCS to expand its product offerings for the banking vertical. I-Flex still the market leader in the segment, with the backing of Oracle crossed a count of 600 customers serviced in 123 countries.

Though the challenges loom large in the form of investments for brand building, distribution systems and business models, the Indian software products story promises large untapped potential for success. The maturing domestic market is yet another factor that could drive the success of this nascent segment of the industry.

**Exchange Rate of US$ 1 = INR 41 has been used throughout this report.**

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**India Brand Equity Foundation**
c/o Confederation of Indian Industry
249-F Sector 18, Udyog Vihar Phase IV
Gurgaon 122015, Haryana, INDIA

Tel: +91 124 401 4087, 4060 - 67
Fax: +91 124 401 3873, 401 4057
Email: j.bhuyan@ciionline.org
Web: www.ibef.org
Website in the Russian language: www.ibef.org/russia