ICT Industry In India: A Swot Analysis

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Introduction

Today is the era of knowledge revolution and across the globe it is making rapid strides in every walk of human life, every kind of industry or commerce, every type of organization. Just like the shift from a hunting society to an agricultural society, then to industrial society and further to post-industrial society and so on, the present shift is to a knowledge society. The all-pervasive knowledge revolution could also be observed as a sequel to the agrarian revolution, industrial revolution or such others of the past. In fact, the rapid advances in the field of Information and Communication Technology (ICT) called ICT revolution, along with the knowledge revolution; both being mutually inter-related and inter-dependent, have brought about a paradigm shift in the way in which business processes are being carried out, organizations are being managed, and governance of the state is being done. In the above context, ICT industry has been making fast advances all over the world and India has been no exception to this general trend. ICT industry in India has been one of the most outstanding achievers in the post-deregulation era. It has been growing at an amazingly increasing pace over the last few years, particularly since 2000. Indian software companies have been able to respond to the ever-increasing demands for software solutions qualitatively as well as cost effectively. Naturally, this has enabled India to become the best performer in this regard among all the developing nations. The ongoing trend of appreciation of Indian rupee observed in 2007 and its adverse impact on the ICT industry in the form of reduced external earnings could to a large extent be withstood by the Indian ICT industry.

Analytical Significance

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For an emerging economy like India, fast economic development is possible essentially by embracing ICT in a big way, as ICT alone can provide the requisite competitive edge that is essential for fast and sustained economic growth in a globalized environment. In its endeavor to become the 'global services hub', what India needs to attain is nothing but unmatched performance in respect of ICT, BPO and allied sectors. While, it appears that the policy initiatives so far have been in the right direction and so is the performance of this industry over the years, there is no scope for complacency as is evident from ever growing competition from other nations, especially the developing world. In this context, it is relevant to make an analysis of the trend in respect of the performance of Indian ICT industry over the last few years vis-à-vis the rest of the world, the latest developments and trends in the field. Such an analysis would reveal, inter alia, the problems and weaknesses of the industry, as well as its opportunities and threats. Accordingly, it helps us to formulate meaningful strategies that are helpful for making the industry abreast of the changes. This paper is an effort in this direction.

Methodology and Data Sources

Methodology for this paper consists of extensive review of relevant literature relating to the performance of various nations in ICT front, with special reference to India. The type of research is both descriptive and analytical. It is descriptive because it traces the trend of the performance of this industry over the last few years till date and also that of the world as a whole. It is analytical also since it makes a critical and comparative analysis of the Indian scenario vis-à-vis the major global developments to arrive at pragmatic measures to sustain and improve the performance of this industry. The data used are secondary data available from reliable and authentic sources, like, the official publications of NASSCOM (e.g. Strategic Review 2006), the World Bank (e.g. World Development Indicators: 2005), Government of India (e.g. Indian Economic Survey), publications of IDC and so on.

Objectives of the Paper

The objectives of this paper are mainly three (i) to make an overall study of the global experiences and trends in respect of ICT industry, (ii) to study the performance of the Indian ICT industry (including, its strengths, weaknesses, opportunities and threats), and lastly (iii) to make constructive suggestions as to ensure superior performance of the Indian ICT industry in the light of the latest developments and trends in the field.

Organization of the Paper

The paper is organized into three major Parts. Part – I deals with the global experiences and trends in respect of ICT industry; Part – II the ICT industry in India. Lastly Part – III gives the suggestions for further improving the performance of the ICT industry in India. The paper ends with the concluding remarks of the author.

Part – I

ICT Experiences and the Performance Trends of the Industry: Global Scenario.

Over the past three decades, the services sector has come to the forefront of economic activity the world over. This shift is characterised by an above average growth in the share of services sector in the total global trade as well as its increasing share of employment and value added in the world economy. Equally notable (as the growth itself) has been the growing participation of developing economies, like India, in this upward trend. While the value of worldwide exports of services has grown at an average of 7.6 percent annually, since 1980 (till 2004), that of export of goods has grown at an annual rate of 6.6 percent. The worldwide trade in commercial services has shown more than a five-fold increase in the past two decades, from under USD 400 billion in the early 1980s to over USD 2,100 billion in 2004. During the above period the contribution of exports of commercial services to total world exports (goods and commercial services) has risen from 16 percent (1980) to 19 percent (2004).

Advances in ICT and their applications over the past two decades have had a paradigm changing impact on the global trade in services. ICT has emerged as the world's fastest growing economic activity, and is transforming resource-based economies to knowledge-based economies. Over the last two decades there has been a mind-boggling levels of growth in information services, products and production processes. Pure data and information-oriented engineering of earlier days have already given way to knowledge engineering. The application and impact of ICT is so pervasive that it is effecting issues as diverse as balance of payment, skill development, design competence, mass media reach, industrial competitiveness, publication, communication, transportation, health, financial infrastructure, industrial productivity and managerial efficiency. Worldwide, ICT has proved itself to be a tool of productivity and efficiency that can very effectively bring about better transparency in all administrative and managerial functions. Appropriate use of ICT can make the state-governance extremely effective and citizen-friendly, contributing positively to the standard of living of the citizen. Internet is becoming so popular that electronic-

commerce (e-commerce) is going to be the way the world will do business in future. Entirely new ways are emerging using which the future Governments will function more effectively and efficiently.

As demonstrated by the Indian ICT sector, today a wide range of services can actually be delivered, and hence consumed, independent of the location of the provider and consumer of these services. The influence of ICT on the growth of trade in services is, in fact, clearly reflected in the growth of Indian ICT sector. Over the past decade, this sector has grown at a Compounded Annual Growth Rate (CAGR) of more than 25 percent and is currently estimated at over USD 36 billion (in annual revenue). Though the services sector is not a product of recent economic evolution – and trade in services is not restricted to ICT, developments in ICT have played an integral role in the globalization of services, not only as a prominent output of the phenomenon, but also as a facilitator of the influence of other underlying drivers. During the last few years, particularly since the financial year 2000, there has been appreciable progress in the global ICT industry. The year 2005 has been a year of steady growth with gradually increasing optimism for the global ICT sector. The key drivers behind the surge in this industry have primarily been the increasing outsourcing adoption and maturing global service delivery. There has been substantial ICT spending across key markets of the US and Western Europe, and strong growth in emerging markets. The global ICT spending for the FY 2005 was to the tune of USD 1480 Billion. Of this the IT services accounted for a revenue to the tune of USD 441 Billion with growth rate of 5.9 percent, whereas the BPO industry had a revenue to the level of USD 395 Billion with growth rate of 9.6 percent. The total revenue of the hardware industry was USD 410 Billion showing a growth rate of 5.1 percent. The revenue generated by the software product industry was to the tune of USD 206 Billion. Such relevant particulars as the break-up of the respective shares of America, Europe and Asia Pacific into Hardware, Software and Services are shown in Table (1) below. Table (2) gives the segment-wise break up of global ICT revenues (FY 2003-2005E).

Table (1) : Revenues from ICT: Global Scenario. (US Dollar Billions)

Particulars (Name of the Continent)	Total Revenue in US Dollar Billions			
	Hardware	Software	Services	Total
America	154	107	491	752
Europe	152	69	251	472

Asia-Pacific	104	30	122	256
Total	410	206	863	1480

(Source: IDC & NASSCOM)

Table (2) : Revenues from ICT: Global Scenario – Segment-wise Growth Rates

Particulars	FY 2003	FY 2004	Y to Y Growth	FY 2005 E
Hardware	351.8	365.4	3.9 %	386.6
Software	186.2	197.3	6.0 %	211.1
IT Services	382.1	399.8	4.9 %	422.6
ITES BPO	405.1	447.7	10.5 %	497.8
Total	1325.0	1410	--	151.8

(Source: IDC)

In short, it may be stated that there has been significant increase in the global services industry in general and ICT industry in particular over the last two decades. In respect of developing countries like India, the above shift has got tremendous strategic significance particularly in the context of the ongoing economic deregulation measures the world over.

Part – II

ICT Industry in India

Indian ICT Industry– Robust Growth and Increasing Global Presence.

India has been in the forefront of the global ICT boom; this situation being characterized by huge spending on ICT that has grown by nearly seven per cent in 2005. Besides, over the last few years there has been a steady growth in Indian ICT initiatives, almost in tune with the global trend in this regard. As in the past, in India outsourcing continued to be the primary growth engine for the ICT sector, with global service delivery forming an integral part of the strategies adopted by customers as well as service providers. Furthermore, the year 2005 has observed the emergence of many hitherto 'India-centric' ICT companies as 'Indian IT Multinationals' by building up considerable presence in the global ICT scenario, through cross-border acquisitions as well as organic growth in other low-cost locations. This in turn has been complemented by global majors continuing to ramp-up their offshore delivery capabilities – predominantly in India, vindicating the success of the global delivery

model. These developments underline the increasingly important role of India in the global ICT arena.

India's unparalleled attractiveness as an ICT destination is now a well-known fact. Besides India's well-established ICT prowess, there are scores of other factors that have attracted the international investors which include, inter alia, the strong economic prospects backed by sound macro-economic fundamentals, quite favorable demographics and investment ratios, rich human capital, gradually opening up of international trade, increasing urbanization, rising consumption spending backed by a growing upper middle class population etc., to name a few. In short, India has already become an attractive investment destination, both as a sourcing base and as a significant market. The consistent growth in Indian ICT industry over the last few years, both on-shore and off-shore, is evident from the figures in Table (3) given below. Similarly, the constantly growing trend in respect of the output (production) of the Indian ICT industry is shown in Table (4) given below.

Table (3) : ICT Exports of India. Amount (Rs. in Crore)

Particulars (Items)	**FY 2000**	**FY 2001**	**FY 2002**	**FY 2003**	**FY 2004**	**FY 2005**
Electronics Hardware	1,400	4,788	5,800	5,600	7,700	8,000
Computer Software	17,150	28,350	36,500	46,100	58,240	78,230

(Source: Economic Survey 2005-2006, Government of India, Ministry of Finance, New Delhi; p.148)

Table (4) : Indian Electronics Production and Software (Exports & Domestic). Amount (Rs. in Crore)

Particulars (Items)	FY 2000	FY 2001	FY 2002	FY 2003	FY 2004	FY 2005
Consumer Electronics	11,200	11,950	12,700	13,800	15,200	16,800
Industrial Electronics	3,750	4,000	4,500	5,550	6,100	8,300
Computers	2,500	3,400	3,550	4,250	6,800	8,800
Communications and Broadcasting Equipments	4,000	4,500	4,500	4,800	5,350	4,800
Strategic Electronics	1,450	1,750	1,800	2,500	2,750	3,000
Components	5,200	5,500	5,700	6,600	7,600	8,800
Sub – Total	28,100	31,100	32,750	37,500	43,800	50,500
Software Exports	17,750	28,350	36,500	46,100	58,240	78,230
Domestic Software	7,200	9,400	10,874	13,400	16,250	19,630

Total	52,450	68,850	80,124	97,000	118,290	148,360

(Source: Economic Survey 2005-2006, Govt. of India, Ministry of Finance, New Delhi; p.148)

From Table (3) it is noted that exports of Indian software and services sector has increased by 34 percent in FY 2005 to reach Rs.78,230 crore (US Dollar 17.2 Billion), from the level of Rs.58,240 crore (US Dollar 12.80 Billion) in FY 2004. From Table (4) it is noted that output of the Indian ICT industry has increased by 25.4 percent in FY 2005 to reach Rs.148,360 crore from the level of Rs.118,290 crore in FY 2004. Table (5) shows the sector-wise profile of the industry. Table (6) gives the relevant growth estimates of the ICT industry in India.

Table (5) : Sector-wise break-up of Revenue: IT – ITES Industry in India.

Particulars (Name of the Industry Sector)	FY 2004	FY 2005	FY 2006E
	Amount (in US Dollar Billions)		
IT Services	10.4	13.5	17.5
- Exports	7.3	10.0	13.2
- Domestic	3.1	3.5	4.3
ITES – BPO	3.4	5.2	7.2
- Exports	3.1	4.6	6.3
- Domestic	0.3	0.6	0.9
Engg. Services and R&D, Software Products	2.9	3.9	4.8
- Exports	2.5	3.1	3.9
- Domestic	0.4	0.8	0.9
Total Software and Services Revenues	16.7	22.6	29.5
Of which, exports are	12.9	17.7	23.4
Hardware	5.0	5.9	6.9
Total IT Industry (including Hardware)	21.6*	28.4*	36.3*

(Source: NASSCOM, Strategic Review 2006) *Total may not match due to rounding off.

Table (6): ICT Industry in India: Growth Estimates for FY 2006.

Name of the Sector	Figures (in US Dollar Billion)
IT Software and Services Exports	23.4
Hardware	6.9

Domestic Market	6.1
Total ICT Sector	36.3*

(Source: NASSCOM, *Strategic Review 2006*) *Total may not match due to rounding off.

As per the latest statistics (May, 2007) of IDC, Indian ICT industry has raised a revenue of Rs. 1,98,477 Crore in 2006, which is up by as high as 31 percent over 2005. It has been noticed that with equal drives from exports revenue and domestic IT spending, the Indian IT industry has been able to keep up with the momentum it gained since 2003. As per IDC's estimates (Table 7) Indian ICT industry is projected to generate revenue over 100 Billion USD by 2011. As is evident from the Table, growth in the revenue from domestic ICT market (19.7 percent) is quite higher than that of ICT exports by FY: 2011, a reversal of the present trend wherein the market is primarily from exports. It may be noted that this shift is essentially because of the very high growth rate (40.4 percent CAGR for 2006-'11 period) of domestic ITES market.

Table (7): ICT Industry in India: Growth Estimates (from FY:2006 to FY:2011) by IDC, India.

(Rupees in Crores)	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	*CAGR 2006-11*
Domestic IT Market	61761	75050	88011	101342	116177	132133	16.4%
Domestic ITeS Market	6650	11970	17955	24239	31511	36238	40.4%
Domestic IT/ ITeS Marke	68411	87020	105966	125581	147688	168370	19.7%
IT/ ITeS Exports Revenue	130067	159889	190475	221844	254422	289857	17.4%
IT/ ITeS Industry Size	198477	246909	296441	347425	402110	458228	18.2%

(Source: IDC, *Directions*-08, 20th Edition of Indian ICT Industry Survey, May 2007.)

Indian ICT Industry: Huge Employment Creator.

ICT industry in India is a huge employment creator also. The estimated employment potential of this industry as of FY 2006 is 12,87,000. It is worthwhile to note that there has been almost a doubling of the employment created by this industry over the last four years. The number of professionals employed in India by this industry is estimated to be 10.45 lakh as on March 31, 2005 (Economic Survey 2005-'06, Government of India, p.147). The sector-wise break up of the employment is given in

Table (8). NASSCOM estimates that ICT would provide employment to 1.1 million people by 2010.

Table (8) : Employment figures relating to Software and Services sector in India.

Sector	FY 2004	FY 2005	FY 2006E
IT Services	215000	297000	398000
ITES-BPO	216000	316000	409000
Engineering Services, R&D and Software Products	81000	93000	115000
Domestic Market (including user organizations)	318000	352000	365000
Total Employment	830000	1058000	1287000

(Source: NASSCOM, Strategic Review 2006) (Figures do not include employees in hardware sector)

Indian ICT Scenario: Growing Technology Adoption.

It is worthwhile to note here that there has been an increasingly growing trend in India, in respect of the adoption of the latest technological advances in the field of ICT and other allied areas, over the last few years. A recent survey (Nov. 2005) by Internet and Mobile Association of India (IAMAI) has revealed that the on-line commerce is likely to grow three-fold by FY 2007. Accordingly, as against an online business worth Rs.570 crore done in FY 2005, the same expected by FY 2007 is Rs. 2300 crore. It has been found that the cyber-café market has grown by a huge 45 percent during the last five years and that the current number of cyber-cafes of 1.05 lakh may go upto 2.62 lakhs by 2010.

ICT in India: SWOT Analysis (Strengths, Weaknesses, Opportunities and Threats)

In this section, an attempt is made to analyse the strengths, weaknesses, opportunities and threats of the ICT industry in India.

ICT in India: Strengths

Indian IT companies are capable of offering efficient software solutions of high quality at low cost. As of now, no other developing country is able to match with India. Many a foreign company has been outsourcing their jobs to India which in turn

resulted in the setting up of a number of BPO centers in the country. Besides, right from 2000, many global companies have been shifting their back-office operations to India. Since then, the business of Indian companies has been on the rise. India has two advantages in this regard, viz. low labour costs, and large number of English-speaking manpower. Many policy initiatives of the Government, including fiscal, aimed at encouraging the electronics and IT sector has been favourable to this industry. [Exhibit: 1]. **Exhibit: 1. Policy Initiatives for Electronics and IT Sector.**

(1)	***Customs duty on all tariff lines covered under the Information Technology Agreement (ITA –1) of WTO has been abolished;***
(2)	***All goods required in the manufacture of ITA – 1 items have also been exempted from customs duty subject to Actual user conditions;***
(3)	***An additional duty for 4 percent has been imposed on items bound by ITA – 1 (except IT software) and their inputs, raw materials, parts, capital goods covered under various customs notifications;***
(4)	***Specified capital goods required in the manufacture of capacitors, electronic fuses, [full pls] TDM, DC micro motors, PCBs, relays and switches have been exempted from customs duty;***
(5)	***To improve information security with growing applications of IT, an Information Security Management System has been set up. A security co-operation agreement is signed with Microsoft to exchange computer security related information and training of technical personnel;***
(6)	***An expert committee has been set up to review the IT Act;***
(7)	***A national facility for Electro Magnetic Interference (EMI) and Electro Magnetic Compatibility (EMC) evaluation of electronic equipments and systems has been set up at SAMEER – Chennai; and***
(8)	***A joint project for setting up Nanoelectronics centers at the Indian Institute of Science, Bangalore and the Indian Institute of Technology, Bombay has been sanctioned with a total outlay of Rs.99.80 crore over a period of five years.***

(Source: Economic Survey 2005-2006, Government of India, Ministry of Finance; p.148)

Competitiveness of Indian ICT Industry in spite of Competition:

Indian ICT industry has shown adequate resilience over the years in spite of the growing competition owing to the emergence of newer ICT destinations. [Exhibit: 2]

Exhibit: 2. Competitiveness of Indian ICT Industry: a Few Facts.

- India maintains its distinctive lead amongst offshore destinations
- Strong fundamentals will help sustain India's value proposition
- 28% of the suitable talent available across all offshore locations (outranks the next destination by a factor of 2.5)
- Keen emphasis on security and quality; and sustained cost competitiveness, gains from increased productivity, utilization and scale expansion.

(Source: Official Website of NASSCOM, *Strategic Review 2006*)

Growing Presence in Domestic Market; Emergence of Indian MNCs in the field of ICT and the Era of Global Outsourcing:

Apart from a strong presence in the global market as reflected in ever-increasing exports, Indian ICT industry has also been increasingly catering to the domestic ICT market as well. Further, of late there has been huge governmental spending in IT to modernize the public sector. In fact, the above situation is reflected in following facts: [Exhibit: 3] **Exhibit: 3. Indian ICT Industry: Growing Presence at Home and Abroad.**

- Domestic market coming into its own, grew by nearly 22% in FY 2006.
- Strong demand over the past few years has placed India amongst the fastest growing IT markets in the Asia-Pacific region.
- Growth in the domestic market is witnessing the early signs of service line depth that characterizes maturing markets.
- Global product companies are also looking to introduce localized versions of their software products to drive usability and penetration.
- Several large domestic contracts announced last year (FY 2005) were won by Indian MNCs in the field of ICT. Many indigenous ICT companies traditionally having an 'India-centric' outlook are increasingly building up noticeable presence in other locations - through cross border acquisitions and organic growth in other low-cost locations.

- Global majors continuing to significantly ramp-up their offshore delivery capabilities - predominantly in India.
- Portfolio of services sourced globally continued to expand into higher-value, more complex activities.
- Transition from outsourcing to global sourcing to drive the next phase of evolution in process quality frameworks and practices.
- Having aligned their internal processes and practices to international standards such as ISO, CMM, Six Sigma, etc., companies in India are seeking to further increase the quality and productivity benchmarks by introducing adaptations more suitable for remote service delivery.

(Source: Official Website of NASSCOM, *Strategic Review 2006*)

There has been remarkable growth in India's ICT revenue over the years; the same as a percentage of GDP has constantly increased from 1.2 percent in 1997-98 to 4.6 – 4.8 percent in FY 2006 (E). [Figure (1) below.]

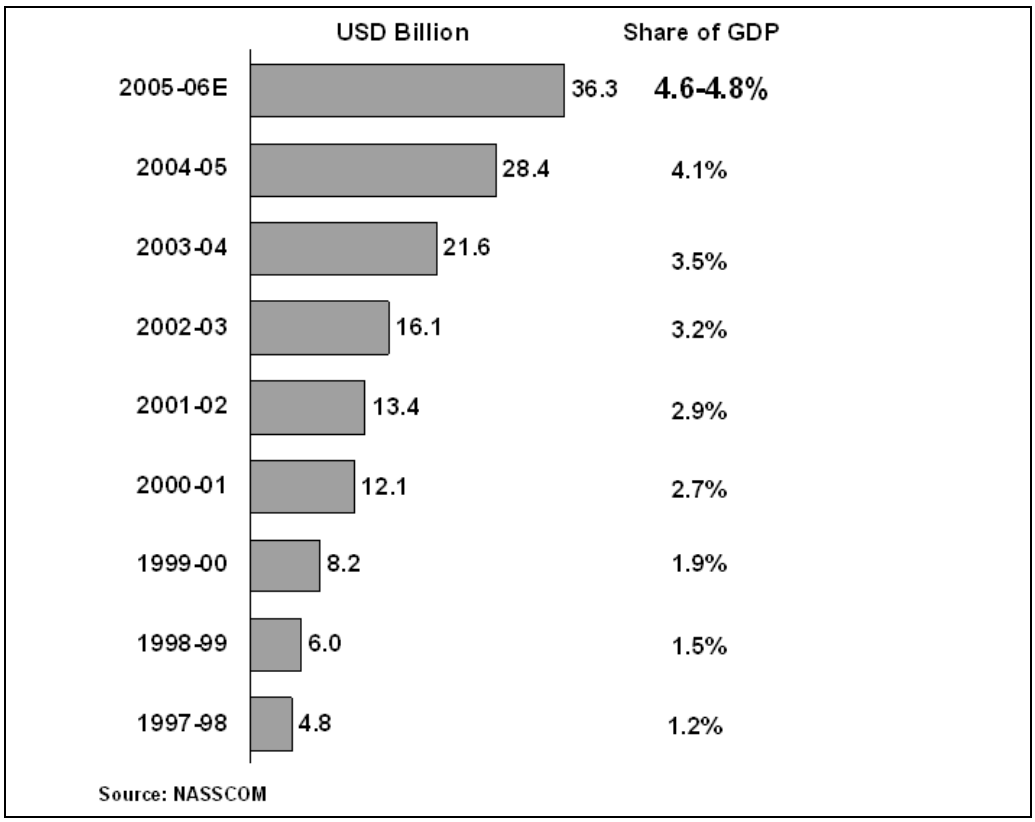

Figure (1): Growth in ICT Revenue of India and its Share in the GDP.

India's expenditure on IT in public sector will be the fastest growing in Asia; the same being expected to grow from USD 1.4 Billion in FY 2005 to USD 2.9 Billion in FY 2009 at a rate of 19.6 percent. This beats China the second fastest growing country in Asia. The heavy investments in IT seeks to modernize the public sector and hence to attract foreign investment.

It is estimated that India will remain as the most popular outsourcing destination in the world till 2015. Another favourable factor for this industry is that the global IT spending is set to increase considerably in the future.

2.2.1. ICT in India: Weaknesses.

In spite of the tremendous growth in the industry over the years, growing international presence, favourable macro-economic environment etc., Indian ICT industry has its own share of problems and weaknesses. These need to be addressed immediately and suitable remedial measures initiated so as to ensure rapid and sustainable growth in the future. The major weaknesses are as follows:

- The overall ICT penetration and usage in India has lagged far behind the international averages. It is still in its infancy, in general.
- In IT front, the position of India (45th) is relatively poor, as is the case with a few other developing nations, like Thailand (43rd) and China (51st); while some other developing countries are performing reasonably well, Chile (32nd), Brazil (39th).
- In India, though the telecom network is the 15th largest in the world, its penetration is very low at the level of 1.3 percent as against the average of 10 at the global level. India has just 3 phones per 100 people as against 11 in China. Further, narrow band-width in most places does not support internet yet. This provides only limited opportunities to business houses to conduct e-commerce applications. Moreover, the gap between urban and rural tele-density has been increasing (TRAI, 2004); and more than half of the Indian villages lack telephone connectivity, let alone the internet access. The 29 million phone lines and 2 million internet subscribers are highly concentrated in urban areas.
- India has just 4 PCs (personal computers) per 1000 people compared to 14 in China. While one among three American's use internet only one in 10,000 Indians use internet.

ICT in India: Opportunities

Exhibit 4. ICT Industry in India: Good Growth Prospects.

- ICT sector is estimated to grow by 28%, (i.e. 4.8% of GDP) in FY 2006 Employment in software and services sector is to touch 1,287,000
- Software and service exports are to grow by 32%, to reach USD 23.4 billion

- Exports are to account for nearly two-thirds of the total revenues.
- Engineering and R&D, software products hold significant opportunity for India - growing at 37% and 43% (CAGR FY 2003-06E), respectively.
- Indian ICT sector is on track to achieve the targeted USD 60 billion in exports by FY 2010
- The total revenues from ICT would rise to USD 17 billion by 2010.
- Exports are to account for nearly two-thirds of the total revenues.

(Source: Official Website of NASSCOM, *Strategic Review 2006*)

The opportunities for this industry are tremendous, a few of the major ones being depicted in Exhibit: 4 above. According to NASSCOM estimates, the Indian ICT Sector is to generate a revenue exceeding USD 36 Billion in FY 2006. Somewhat similar estimate has been made by IDC according to which the above estimate is USD 40 Billion by FY 2007.

In spite of the significant growth over the years and also increased presence of Indian ICT companies worldwide, it is estimated that less than 10 percent of the addressable market for globally sourced ICT has so far been captured by Indian companies. This in turn points to the huge untapped market and hence immense growth potential for the Indian players. Regarding the prospects of India, the latest report of IDC (*IDC's India Top Ten IT Market Predictions 2007*) makes some realistic projections. [Exhibit: 5]

Exhibit: 5. Projected Growth Indian ICT Sector by IDC.

1. India continues to soar. South Asia's largest economy will continue to lead the pack as the next IT market opportunity.
2. Dynamic IT to enter Phase 2 in 2007, from consolidation to virtualization and service oriented architecture (SOA).
3. Disruption to set in for small and medium business (SMB) focused go-to-market strategies. New delivery and usage models will evolve in 2007.
4. Connectivity, content and convergence will run parallel courses, but their real orchestration into a fully evolved 'digital home' phenomenon will remain elusive in 2007.

5. Vendors will adopt a 'productized services' delivery model in 2007 to achieve standardization and enhance profitability.

6. Internal security concerns will drive the enterprise security solutions market in 2007.

7. Despite huge investments slated for telecom network infrastructure, 2007 will be a year of build outs rather than rollouts for 3G and WiMAX services.

8. IT retailing to gain momentum, but 2007 will be remembered more as an year of experimentation.

9. Emerging Asia will approach BRIC-like performance

10. Worldwide IT spending will be marginally higher in 2007, driving vendor risk-taking

(Source: *IDC's India Top Ten IT Market Predictions* 2007, IDC, Official Website of IDC India,)

ICT in India: Threats.

In spite of the immense growth potential of the Indian ICT industry, the industry might face a number of threats in the days to come. These include, inter alia, the following:

- As of now, majority of the IT and BPO firms in India are located in Bangalore. [Table: 8, below.] This has resulted in such major problems as overcrowding, inadequate infrastructure, high levels of attrition, ever growing labour cost and other expenditure. Accordingly, companies involved in low-end BPO work are finding Bangalore too costly and are forced to relocate to other cities because of the diseconomies of scale.

Table (8) : The Number of IT and BPO Firms Established in India till March 2005.

City	Number of IT and BPO Firms
Bangalore	1468
Delhi	210

Mumbai	186
Chennai	98
Hyderabad	79
Pune	62
Kolkata	29

(Source: *Business World,* cited in Vinod Kumar, P., "The Future of the Indian IT, ITES & BPO Industry", *Facts for You*, December 2005, p. 28)

- India may face significant level of competition in the long term from such countries as China, Canada, Philippines, Russia, Poland, Mexico, Hungary and Czech Republic. On the one hand, wages are low in these countries and on the other hand they have better infrastructural facilities than India. This situation may create a major unemployment problem in India.

- High attrition rates in the ICT industry, as high as 20 to 80 percent is indeed a matter of great concern. Coupled with this is the problem of shortage of right manpower, particularly at the mid-management level, which is expected to be acute by the year 2008. Scarcity of skilled manpower equipped with education and training of quality and relevance will be a chronic problem for the BPO companies in the days to come. This will definitely affect adversely the long-term prospects of the industry.

- In spite of the fact that India has been receiving higher-end processing jobs being outsourced to the country, the security issues are yet to be addressed properly and the industry is still sailing through somewhat rough waters.

- Though India is currently enjoying the status of the best IT outsourcing destination, the same is under attack from China – the biggest threat to India in IT outsourcing. A Global Outsourcing Report recently released by a Geneva-based strategic advisory firm points out that China will

replace India as No. 1 technology outsourcing country, in the next ten years. The only problem that China faces now is the shortage of English speaking technical personnel. But this problem is likely to be solved in the next 5 to 10 years, it is expected; thus posing a formidable enemy to India.

- Appreciating trend in the value of Indian Rupee another factor that adversely affects the fortunes of Indian ICT industry significantly. The revenues from exports would come down as the rupee appreciates. Only Governmental initiatives like reduction of the duties on imports can provide some relief to the ICT sector in the current context.

Part – III
Suggestions for further Improving the Performance of ICT Industry

In view of the foregoing discussions, an attempt is made here to enumerate a few pragmatic and realistic strategies that that help improve the performance of the industry still further and hence to equip India to maintain its current superior status consistently. These are as follows:

(1) There is an imminent need to enhance the current talent pool advantage. For this, focus on skill development is very much essential. Towards this end, active academic-industry partnerships have to be encouraged with a view to restructure the curriculum with emphasis on (i) relevance, (ii) quality. Needless to mention, this has to be an on-going activity and curriculum revisions on a regular basis at very frequent intervals may be essential. Moreover, apart from the content, relevance and quality of the curriculum, there should be equal emphasis on development of various "soft skills' like, communication skills, presentation skills, inter-personal skills etc. as well as analytical and decision-making skills. Compulsory training for all students in the service industry for a few months is good.

(2) The existing urban infrastructure (Tier I) and emerging (Tier II and Tier III) cities needs to be upgraded and strengthened. This requires continued emphasis on proactive regulatory reforms to facilitate greater ease of doing business in this sector.

(3) Cyber security issues have to be addressed with utmost urgency. Towards this end, enabling legislations have to be passed at the earliest.

(4) A philosophy of "Operational Excellence" has to be inculcated amongst industry players (across the board) to ensure that the quality of Indian software exports sustains world-leading benchmarks in performance.

(5) The potential of the domestic market has to be fully tapped and accordingly the domestic market needs to be developed maximum.

(6) Considering the special nature of the Indian economy, special thrust is required (i) to provide standard IT infrastructure in the rural areas as well, so as to attract ICT and BPO industry (ii) to provide high quality IT training to students of rural areas so that they can be employed in the ICT or BPO industry.

(7) The policy makers have to proceed actively in the direction of economic deregulation and actually an uncompromised agenda towards global free trade needs to be promoted consistently.

(8) The various ICT initiatives in the anvil have to be implemented systematically through concerted action of the all the key stakeholders, like, the government, industry, academic community etc. Further, there should not be any compromise on the quality at any level.

Conclusion

Considering the favourable situation that India currently enjoys in respect of ICT and BPO industry, building up on these already existing infrastructure can very well be done with comparative ease. Though competition from other nations, the issue of appreciation of Indian rupee etc. are posing threats to India in maintaining its No.1 status in ICT outsourcing; it may be stated that with the concerted action of all the key stake-holders (like, the government, industry and academic institutions etc.) and that too keeping in view of the "SWOT" of the country, the above potential threat can very well be taken care of by the country. Accordingly, let us hope that Indian ICT industry can very well maintain its current status and also attain greater heights in the days to come.

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