

# **Indian IT: Building on Success**

Address to the NASSCOM Executive Board

by

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1. I am grateful to my good friend Kiran Karnik for inviting me to speak to the NASSCOM Executive Council. I have had a long but low-profile association with the IT industry for over two decades. I was involved a little in the establishment of the Texas Instruments facility in Bangalore way back in 1985-86 when I was in the Ministry of Industry. Later when in Planning Commission and working with Sam Pitroda, I played a small role in 1988-89 to get Jack Welch and GE to look at software sourcing from India in a systematic manner and in preparing a strategic plan for the growth of the IT industry. In the nineties in the PMO and the Finance Ministry, I was fortunate to be a bit player in the economic reforms process and in restructuring of the telecom industry. A fourth but somewhat personal connection with the IT industry is my friendship with Nandan Nilekani going back to the early 1970s when we formed the quiz duo for IIT Mumbai and whose generous offer to be an early investor in Infosys I was not in a position to accept to my everlasting regret and indigence.

2. The IT industry has grown spectacularly in the past decade—at least the export segment—and I don't have to go over the numbers that are well known to all of you. The point I want to make is that now the IT industry is at that critical inflection point where its **multiplicative** impact will start becoming visible and tangible. Going by current trends, ***IT will have the same impact on the economy in the next three-four years as it has had in the last twenty years.***

3. A couple of months back, the securities firm CLSA came out with detailed analysis of the Indian IT industry which revealed that:

- 20-25% of India's GDP expansion over the next 3-4 years will come from IT;
- India's IT exports will cross India's oil imports from 2007/08 onwards assuming that oil prices are at around \$ 65 a barrel;
- The IT industry –directly and indirectly—will pick up a third of the addition to the urban labour force over the next three-four years.
- Over the next three-four years, the IT industry will pick up around 80-85% of India's employable engineers.
- One in seven income tax payers in the country will be a IT professional by 2010 up from the current one in ten.

4. These are just few of the significant impacts. I am not mentioning the huge impacts on consumption expenditure, real estate, on air travel, on bank loans and, perhaps, most important beer consumption. But I am not here to share in your triumphs. I am here to share some concerns of mine, concerns that are, by no means, new since some of you have been articulating them as well.

5. What bothers me most is the slow geographical spread of IT. The demand and aspiration to participate in the IT revolution is there across the length and breadth of this vast country (there are 285 towns and cities where NIIT has its centres, as a rough indicator of this desire) but I am afraid neither the government nor the industry has shown any great sense of urgency here. Let us take IT exports as a whole, which in 2006/07, were around \$ 32 billion or around Rs 144, 214 crores. This is how it was spread across 46 locations of the software technology parks (STPIs).

- Seven cities accounted for a whopping 95%--Bangalore (33%), National Capital Region (15%), Chennai (14%), Hyderabad (13%), Pune (10%), Navi Mumbai (8%) and Kolkata (2%).
- Seven cities together account for yet another 3%--in descending order of contribution these are Mysore, Bhubaneswar, Mangalore/Manipal, Gandhinagar, Thiruvananthapuram, Mohali and Jaipur.
- Four cities together account for yet another 0.6%--Indore, Vishakapatnam, Kochi and Coimbatore in descending order of contribution.
- Eight cities together account for a further 0.2%--Lucknow, Nagpur, Puducherry, Vijayawada, Kanpur, Nashik, Trichy and Dehradun in descending order of contribution.
- Thirteen cities together account for the balance 0.03%--Aurangabad, Hubli, Madurai, Rourkela, Tirunelveli, Kolhapur, Guwahati, Srinagar, Shimla, Allahabad, Tirupati, Bhilai and Ranchi.
- Seven cities contribute nothing—Warangal, Imphal, Gangtok, Durgapur, Kharagpur, Siliguri and Jammu.

6. There are perfectly valid reasons for this geographic distribution--history, infrastructure and access, educational facilities, social harmony, etc. But I am sure you will agree with me that it is extremely skewed. Incidentally, the IIT cheerleaders must note that both Kanpur and Kharagpur are almost non-existent on the IT map of India proving what I have always felt—that the IITs have had great global impact but their local impacts have not been commensurate with the hype that has come to surround them. **Furthermore, SEZs appear to be increasing the digital divide.** I have always felt that the true value of SEZs must be judged by the extent to which they help promote labour-intensive manufacturing. But so far, of the 142 SEZs **notified**, 86 are for IT and ITES alone. And of these 86, the usual suspects are most prominent—26 are in Andhra Pradesh, 14 in Tamil Nadu, 13 in Karnataka and 10 in Maharashtra making a total of 80% in these four states alone.

7. So my friends, my **first** plea to you is think of the under-served regions and areas. Sure, infrastructure and connectivity will have to improve but some entrepreneurial endeavour on your part will not be out of place. I want to place on record here my appreciation for TCS with whom I am now working to develop Guwahati as a IT location using the IIT there as a focal point. I have spoken to TCS about Srinagar as well since it had shown interest in Lahore some time back and I am hopeful that we can take a NASSCOM team to J&K soon. Recently, I have spoken to Infosys on Shillong. I think what NASSCOM needs to do proactively is engage with the state governments that are now not on the IT radar screen prominently and work with them to develop promising locations. If NASSCOM and a couple of companies get serious, I believe infrastructure and connectivity issues will also begin to get addressed by the central government in a more time-bound manner. It is a classic chicken and egg situation – IT majors are not present in the Northeast and therefore there is no pressure to improve infrastructure. Infrastructure is getting upgraded slowly because IT majors are not present !

8. My **second** point this afternoon is also a well-worn issue. How long can the IT industry be in the “To H1B or not to be H1B” mindset? 75% of our software industry is exports, unlike China where the domestic market consumes 75% of the business. Exports are tremendously attractive and the QSQT phenomena—*Quarter Se, Quarter Tak*—has also had its impact. A very senior official of one of our leading software export companies was bemoaning to me that the market cap of his company which is closely monitored by analysts was getting depressed by the comparatively higher proportion of the home market in total

revenues!! I find my IT industry friends ever ready to dispense advice on every issue under the sun but when it comes to putting their money where their mouth is, when it comes to making major commitments of manpower particularly, they slink away. Sure, each company has some showpiece or the other as proof or demonstration of its corporate social responsibility. But that is not what I am talking about. Here again I want to make special mention of TCS that took on, as a challenge, the task of developing a comprehensive IT system for managing the implementation of the ambitious National Rural Employment Guarantee Act. The system has been in place for well over a year in Andhra Pradesh and its impact is demonstrably significant. Earlier we had the computerisation of land records in a couple of states like Karnataka and, of course, the computerisation of railway reservations which has had tremendous social value as well. We need to take up a couple of **national** initiatives in a PPP mode where IT can bring about a transformation. The easy availability of software in local languages has overcome what has traditionally been a barrier to diffusion.

9. In this connection, I am sure that you are all aware that in addition to the initiatives that have been taken by different state governments, the Central government has recently launched a very major e-governance programme. 27 mission-mode projects have been taken up in addition to the establishment of infrastructure. Of these 9 are in the Central government and cover income tax, passport and immigration, company affairs, insurance, citizen data base, excise, pensions, banking and public grievances. 11 projects are with State government and cover areas like land records, road transport, property registration, treasuries, panchayats and municipalities, commercial taxes, police and employment exchanges. 7 projects are in the integrated services category and cover areas like EDI for international trade, e-procurement, e-commerce, e-businesses and common service centres. By December 2008, the state-wide area network project at a cost of over Rs. 3000 crores is expected to be in place with a minimum 2 Mbps connectivity till the block level and around 7000 points of presence all over the country. BSNL has also an ambitious programme for expanding broadband connectivity in 2008 and as you know in many regions of our country connectivity is still provided through BSNL, even though private companies may hog the headlines. In the northeast alone in 2008, for instance, broadband connections are expected to increase ten-fold. These projects present numerous and enormous business opportunities even after allowing government's preference towards NIC. Perhaps the way to go would be to have joint ventures with NIC for some of you.

10. This takes me seamlessly into my **third** point. Competitiveness, we have been led to believe, emanates from technology development. This is true to an extent. My own view has always been that technology application is in the long run more crucial. It is this that leads to productivity gains. We have not paid adequate attention to this aspect of technology strategy and all that it entails. Let us not, however, be under the illusion that technology holds the key always. Indeed I find an obsession with technology dangerous. Many of our top political leaders and our IT industry chieftains have given ample evidence of their affliction on this account. Technology is always embedded in a social context and unless we focus on the core, unless we always keep in mind the adage - technology is the answer but what was the question - we are liable to be disillusioned soon. Thus, we can do e-procurement or e-auctions but unless we re-engineer underlying processes completely, GIGO ( garbage in, garbage out) will stare us in the face.

11. My **fourth** and final point relates to the use of IT as an instrument of the country's strategic and economic diplomacy, something in which I have got involved of late. It is well-known that the development of our IT capability has had a profound impact on Indo-US relations. As the author of Chindia I have absolutely no doubt that Chinese attitudes towards us underwent a fundamental shift when our IT export industry emerged in the USA in such a stunning manner. The Government has established an IT development centre in Tashkent through CDAC as part of its policy to build an Indian presence in Central Asia. A couple of months back, I was in Azerbaijan where its President expressed a great desire to get India's assistance in building an IT industry in that country. I have been in touch with my counterparts in Bangladesh, Pakistan and Sri Lanka and in these countries too, there is tremendous interest in cooperation with India in IT. Through TCIL, India is helping establish a pan-African e-network centred at Dakar, Senegal for tele-medicine and tele-education, an initiative that owes its origin to Dr. Abdul Kalam's visit to Johannesburg in September 2004. I think NASSCOM, the MEA and the Ministry of Commerce need to work more closely together and through NASSCOM, the government can leverage the expertise of individual companies. The point I am making is that India must now begin to aggressively use its IT industry to build new economic partnerships in countries that are vital to our interests. One of our most successful foreign diplomacy initiatives since 1964 has been ITEC— Indian Technical and Economic Cooperation---run by the MEA that offers around 4000 scholarships every year. The time has come to make it an IT-EC.

12. I think it was the late Dewang Mehta who did so much to build the NASSCOM brand who once said that India was doing very well in IT and beauty because government was far away from both. He was not entirely right about the former. The government has indeed played a key role in creating infrastructure and I am of the firm opinion that cities like Bangalore and Hyderabad could not have achieved their current status without the crucial investments made in public S&T there from the late 1950s onwards. Public investments can still play a catalytic role, even in these days of PPP which as Montek Ahluwalia reminded me some months back is private funding of public projects and not public funding of private projects as many people in Indian industry seem to think. In IT, there is great scope for true PPP as for example in the area of education and training. I do hope that while exulting in its global success, every once in a while NASSCOM reminds itself of its local roots and its domestic imperatives.

**EXPORTS FROM STPI Centres in 2006/07 (Rs. in crores)**

Bangalore	47250	Kolkata	3500	Mysore	760
NCR	22357			Bhubaneshwar	732
Chennai	19867			Mangalore	681
Hyderabad	18294			Gandhinagar	563
Pune	15355			Thiruvananthapuram	561
Mumbai	12058			Mohali	552
				Jaipur	412
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Indore	295	Lucknow	61	Aurangabad	10
Vishakapatnam	245	Nagpur	61	Hubli	9
Kochi	189	Pondicherry	44	Madurai	8
Coimbatore	179	Vijayawada	42	Rourkela	6
		Kanpur	37	Thirunelveli	4
		Nasik	26	Kolhapur	3
		Trichy	25	Guwahati	2
		Dehradun	21	Srinagar	1.44
				Shimla	1.2
				Allahabad	1
				Tirupati	1
				Bhilai	0.42
				Ranchi	0.35