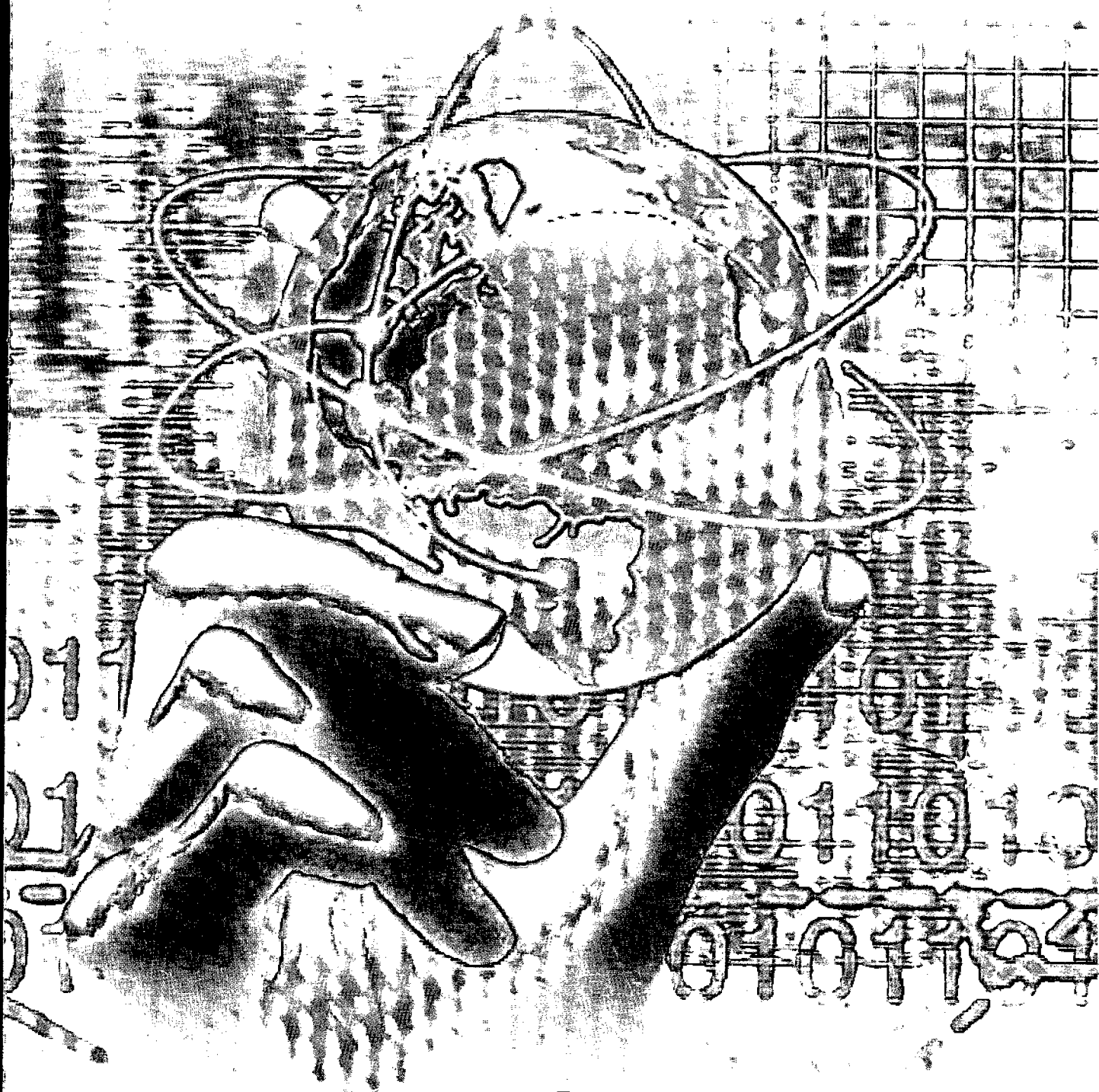
ISSN-0971-8400

YOJANA

November 2007 A DEVELOPMENT MONTHLY Rs 10



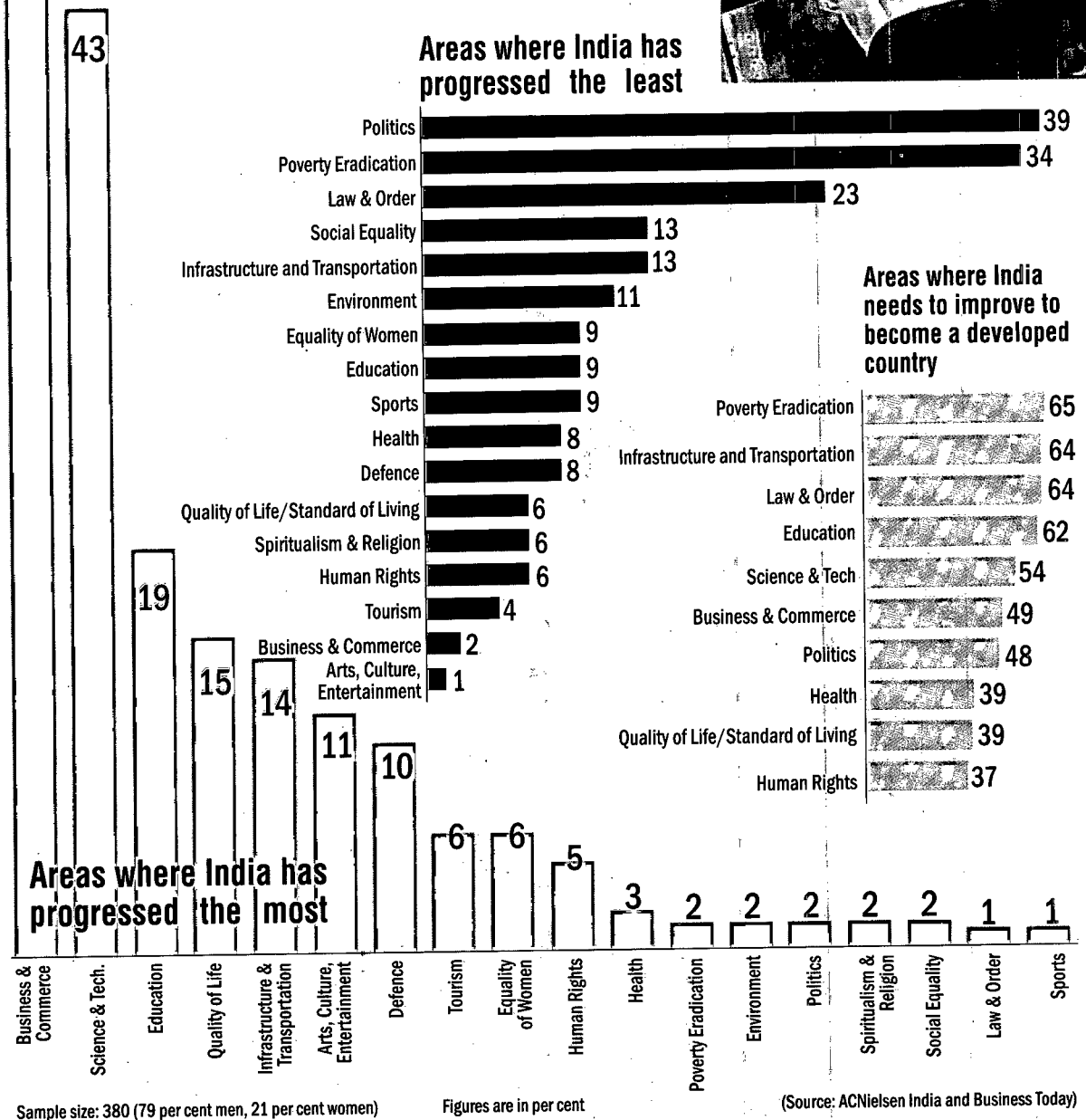
50 years of Indian IT

57

Reforms, Patriotism are in, Politics is out

At 60, India is young and raring to go. Independence and patriotism have taken on new meanings. The political dinosaurs may be raving and ranting about economic reforms and liberalisation, but they're obviously out of touch with India's GenNext—an ACNielsen survey on 'how people perceived India's growth' found that 63 per cent of Indian youth feel that globalisation has been extremely beneficial.





Sample size: 380 (79 per cent men, 21 per cent women)

Figures are in per cent

(Source: ACNielsen India and Business Today)

November 2007 Vol 51

YOJANA

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Website : www.publicationsdivision.nic.in

Let noble thoughts come to us from every side
Rig Veda

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EDITORIAL OFFICE : Yojana Bhavan, Sansad Marg, New Delhi Tel.: 23096738, 23717910, (23096666, 23096690, 23096696- Extn. 2509, 2510, 2565, 2566, 2511). Tlgm.: Yojana. **Business Manager (Hqs.) :** Ph :24367260, 24365609, 24365610

For new subscriptions, renewals, enquiries please contact : Business Manager (Circulation & Advt.), Publications Division, Min. of I&B, East Block-IV, Level-VII, R.K. Puram, New Delhi-110066, Tel.: 26100207, Telegram : Soochprakasan and Sales Emporia : Publications Division : *Soochna Bhavan, CGO Complex, Lodhi Road, New Delhi-110003 (Ph. 24365610) *Hall No. 196, Old Secretariat, Delhi-110054 (Ph. 23890205) 701, 'B' Wing, Kendriya Sadan, Belapur, Navi Mumbai-400614 *8, Esplanade East, Kolkata-700069 (Ph. 22488030 *'A' Wing, Rajaji Bhawan, Basant Nagar, Chennai-600090 (Ph. 24917673) *Press Road, Near Govt. Press, Thiruvananthapuram-695001 (Ph. 2330650) *Block No. 4, Ist Floor, Gruhakalpa Complex, M.J. Road, Nampally, Hyderabad-500001 (Ph. 24605383) *Ist Floor, 'F' Wing, Kendriya Sadan, Koramangala, Bangalore-560034 (Ph. 25537244) *Bihar State Co-operative Bank Building, Ashoka Rajpath, Patna-800004 (Ph. 2301823) *Hall No.1, 2nd Floor, Kendriya Bhawan, Sector 8, Aliganj, Lucknow-226024 (Ph. 2325455) *Ambica Complex, Ist Floor, Paldi, Ahmedabad-380007 (Ph. 26588669) &Naujan Road, Ujan Bazar, Guwahati-781001 (Ph. 2516792)

SUBSCRIPTION : 1 year Rs. 100, 2-Rs. 180, 3-Rs. 250. For neighbouring countries by Air Mail Rs. 530 yearly; for European and other countries Rs. 730 yearly.
No. of Pages : 76

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About the Issue



It was in 1956, five decades ago, the first computers reached India and today we celebrate the growth of Indian IT in the last 50 years. The Hollerith HEC - 2M from England was installed at Indian Statistical Institute, Kolkata. India is now a front-runner in the age of information revolution. The Indian software and services industry has given India formidable brand equity in the global markets.

Software and services exports are the dominating factor in the overall growth of Indian IT industry. The software and information technology enabled services (ITES) export from India grew from US $ 12.9 billion in 2003-04 to US $23.6 billion in 2005-06. While the US and the UK remain dominant markets for software and ITES exports, contributing to 67% and 15% of total exports respectively. Firms are also keenly exploring new opportunities. The growth of the software industry has been largely driven by its knowledge professionals. The country has a huge base of highly qualified, English speaking, strong technical talent. UNCTAD's World Investment Report 2004 ranks India as the second largest base for IT and ITES career opportunity. To retain our position as a major player in the IT arena over a period of time, there is a need to address the human resource requirement of the industry on a continuous basis.

The level of IT investment varies widely across industry sectors. It is estimated that the financial services sector accounts for the largest share of investment. This includes spending by banks, insurance companies, and securities firms. Rapid changes in telecommunication technology, increase in mobile communications, and intense competition in the global telecom service and equipment markets have spurred IT expenditure in the telecom sector. Other sectors that spend strongly are manufacturing, retailing, health care, utilities, travel, and various governments.

The Information Technology Act, 2000 provides a legal framework for transactions carried out using computers and the internet technologies. As the technology is an ever-evolving process for providing efficient and cost effective options, it is felt that a fresh look to the technology driven law needs to be given. With proliferation of e-governance and other Information Technology applications, security practices and procedures relating to such applications need to be strengthened.

In this issue, well known experts analyse the journey of Indian IT in last five decades. Yojana also takes a look at IT in government for its citizen. The end objective of IT services has to be to make all government services accessible to the common man in his/her locality and ensure efficiency, transparency and reliability of such services at affordable costs to realize the basic needs of the common man. The challenge for Indian IT begins now. It is important for the new path to be inclusive and to cover all sections of society both in rural and urban areas.

ECONOMIC INDICATORS

ANNUAL INDICATORS	Units	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08 (Proj.)
Population (as on 1st October)	mln. nos.	1019	1038	1055	1073	1090	1107	1122	
GDP at current market prices (new series)	Rs.crore	21,02,375	22,81,058	24,58,084	27,65,491	31,26,596	35,67,177	41,25,725	
GDP: Per Capita (current prices)	Rupees	20,632	21,976	23,299	25,773	28,684	32,224	36,771	
Gross domestic savings (current prices)	(% of GDP)	23.7	23.5	26.4	29.7	31.1	32.4		
Gross domestic capital formation (cur. pr)	"	24.3	22.9	25.2	28.0	31.5	33.8		
Gross Fiscal Deficit	"	5.7	6.2	5.9	4.5	4.0	4.1	3.7	
Sectoral shares (of GDPfc at current prices)									
Agriculture & allied	% of GDP	23.4	23.2	20.9	20.9	18.8	18.3	17.5	
Industry	"	26.2	25.3	26.4	26.1	27.5	27.6	27.9	
Services	"	50.5	51.5	52.7	52.9	53.7	54.1	54.6	
Prices (Annual Average)									
WPI of All commodities (wt 100.00)	Apr 1993=100	155.7	161.3	166.8	175.9	187.2	195.5	206.1	
CPI-IW General index: India	Jul 2001=100	95.93	100.07	104.05	108.07	112.2	117.2	125.0	
Agriculture: Production									
Foodgrains	mln. tns.	196.8	212.9	174.8	213.9	198.4	208.6	216.1	217.2
Cereals	"	185.7	199.5	163.7	198.3	185.2	195.2	201.9	202.6
Rice	"	85.0	93.3	71.8	88.5	83.1	91.8	92.8	93.0
Wheat	"	69.7	72.8	65.8	72.2	68.6	69.4	74.9	75.0
Pulses	"	11.1	13.4	11.1	14.9	13.1	13.4	14.2	14.6
Oilseeds	"	18.4	20.7	14.8	25.2	24.4	28.0	23.9	27.3
Sugar cane	"	296.0	297.2	287.4	233.9	237.1	281.2	345.3	365.0
Industry & Energy									
Index of industrial production (wt 100)	Apr 1993=100	162.69	166.99	176.64	188.97	204.8	221.52	247.05	
(Annual Average)	% change	5.06	2.64	5.78	6.98	8.37	8.16	11.53	
Commercial energy production	MTOE #	230.9	237.9	246.9	259.2	272.0	281.4		
Electricity generation by public utilities	mln. kwh	501.2	517.4	532.7	565.1	594.5	617.5	662.5	
External Transactions									
Exports	US $ mln.	44147	43958	52823	63886	83502	103075	126246	
Imports	"	50056	51567	61533	78203	111472	149144	190438	
Forex reserves (March-end) ^	"	39554	51049	71890	107448	135571	145108	191924	
Foreign direct investments in India (net)	"	4031	6125	5036	4322	5987	7661	19442	
Portfolio investments in India (net)	"	2760	2021	979	11356	9311	12494	7004	
Rupee exchange rate	Rs / USD	45.61	47.55	48.30	45.92	44.95	44.28	45.29	

INDICATORS: MONTHLY	Units	Aug '06	Sept '06	Oct '06	Nov '06	Dec '06	Jan '07	Feb '07	Mar '07	Apr '07	May '07	Jun '07	Jul '07	Aug '07	Sep '07
Prices															
Wholesale price index	1993-94= 100	205.3	207.8	208.7	209.1	208.4	208.8	208.9	209.8	211.5	212.3	212.3	213.6	213.4	
(All Commodities)	% change	5.13	5.38	5.47	5.49	5.68	6.38	6.34	6.61	6.27	5.45	4.52	4.4	3.97	
Agriculture															
Actual rainfall (All-India)	Milli metres	325	169	44	50	12	2	30	32	27	48	153	259	299	194
Dev. from normal rainfall	Per cent	8	0	-47	33	-24	-92	32	14	-20	-31	8	0	-2	14
Stock of Rice (Central pool)	mln. tns.	7.8	6.0	12.5	12.1	12.0	12.6	14.0	13.2	13.5	12.6	10.6	–	6.7	
Stock of Wheat (-do-)	mln. tns.	6.7	6.4	6.0	5.6	5.4	5.4	5.1	4.6	11.6	13.3	12.8	–	10.9	

Investments (CMIE CapEx database)		Mar 05	Mar 06	Jun 06	Sep 06	Dec 06	Mar 07	Jun 07
Project investments outstanding*	Rs.crore	19,75,539	28,14,222	30,55,052	36,16,013	40,56,048	44,80,243	46,97,985
at the end of the quarter	project count	9826	10054	10431	11291	12455	12735	12898

Note: (a) % change is year on year (y-o-y) basis; (b) # MTOE: Million Tonnes of Oil Equivalent; (c) ^ Total value of foreign currencies held by Govt. of India (excl. gold & SDRs); (d) * It is the sum total of the project costs of all the outstanding (Live) capital expenditure projects happening in the country. These projects may be under any of the following three stages: announced, proposed, or under-implementation.

Source: i^3 (i-cube) at Planning Commission, New Delhi, **Centre for Monitoring Indian Economy (CMIE)**

Big Successes, Large Gaps

Jairam Ramesh

The IT industry has grown spectacularly in the past decade- at least the export segment. The 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 in the next three to four years as it has had in the past twenty years.

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

- 20-25% of India's GDP expansion over the next three to four years will come from IT;
- India's IT exports will cross the country'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 to four years.

What's bothersome is the slow geographical spread of IT. Let us take IT exports as a whole, which in 2006-07 were around $32 billion or around Rs 144, 214 crore. This is how it was spread across locations of the software technology parks (STPIs).

- Seven cities accounted for a whopping 95% - Bangalore (33%), the 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.

There are valid reasons for this geographic distribution. The IITs of Kanpur and Kharagpur are almost non-existent on the IT map of India, proving 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 per cent in these four states alone.

The need now is to think of the under-served regions and areas. Sure, infrastructure and connectivity will have to improve but some entrepreneurial endeavour will not be out of place. TCS is working to

The author is Union Minister of State for Commerce.

develop Guwahati as an IT location using the IIT there as a focal point. Nasscom needs to engage with state governments that are now not on the IT radar screen and work with them to develop promising locations.

How long can the IT industry be in the "To HiB or not to be HiB" mindset? Seventy-five per cent of our software industry is exports, unlike China, where the domestic market consumes 75% of the business. We have 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.

In addition to the initiatives taken by different state governments, the Central government has recently launched a very major e-governance programme. Twenty-seven mission-mode projects have been taken up in addition to the establishment of infrastructure. Of these nine are in the Central government and cover income tax, passport and immigration, company affairs, insurance, citizen data base, excise, pensions, banking and public grievances. Eleven projects are with state governments and cover areas like land records, road transport, property registration, treasuries, panchayats and municipalities, commercial taxes, police and employment exchanges. Seven 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 3,000 crore is expected to be in place with a minimum 2 Mbps connectivity till block level and around 7,000 points of presence all over the country.

Competitiveness, we have been led to believe, emanates from technology development. This is true to an extent. My own view has always been that it is technology application that in the long run leads to productivity gains. We have not paid adequate attention to this aspect of technology strategy and all that it entails. 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.

Exports From STPI 2006-07

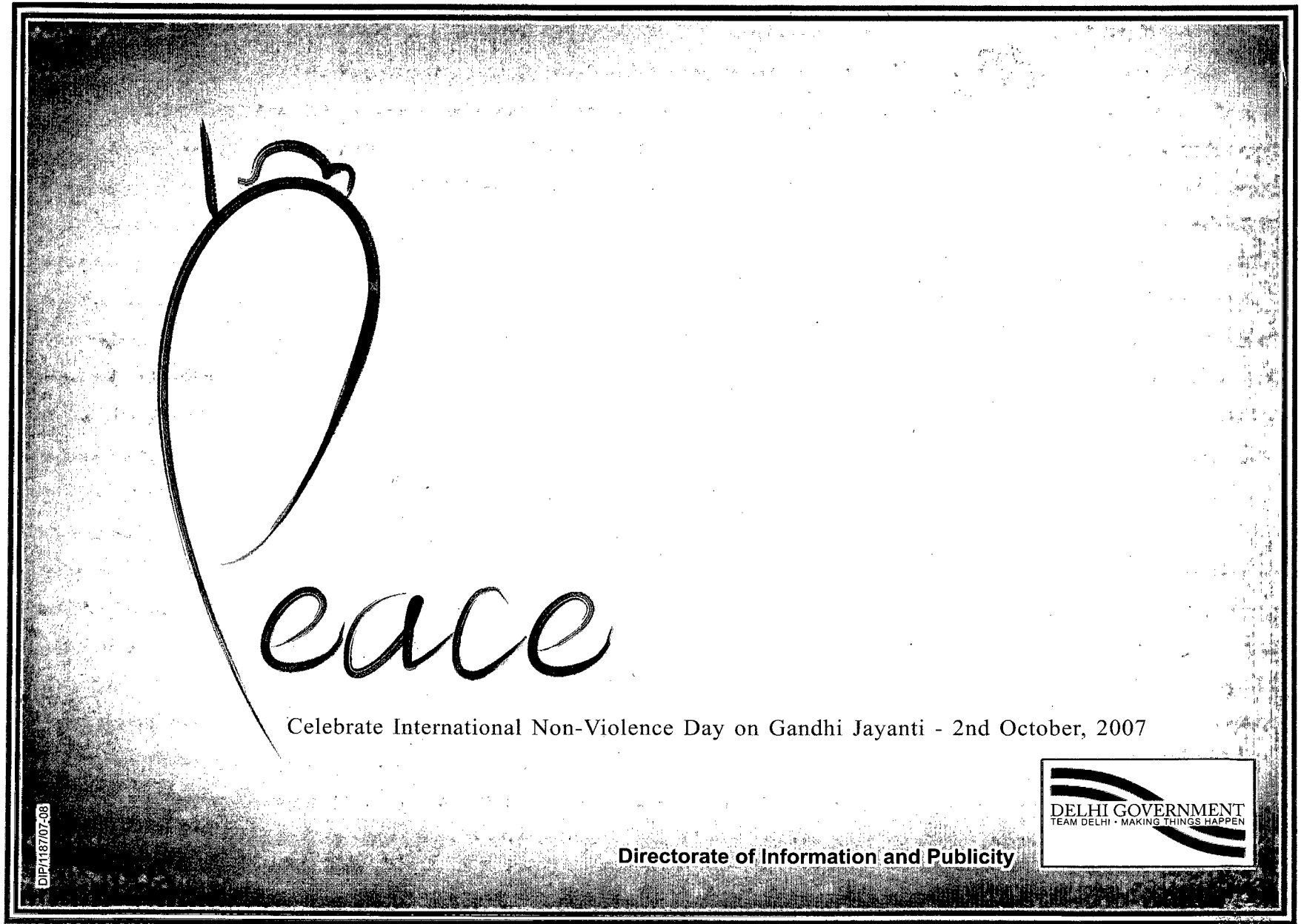
Bangalore	47250
Chennai	19867
Hyderabad	18294
Mumbai	12058
Kolkata	3500
Mysore	760
Bhubaneswar	732
Mangalore	681
Gandhinagar	563
Thiruvananthapuram	561
Mohali	552
Jaipur	412
Indore	295
Coimbatore	179
Lucknow	61
Nasik	26
Dehradun	21
Hubli	9
Kolhapur	3
Allahabad	1

(Figures in Rs crore)

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.

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 day of PPP. 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.

(This piece has been excerpted from his address recently to the Nasscom executive board.) ❑


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IT for Development and Social Welfare

D Dutta Majumder



Dwijesh Dutta Mazumder saw it all. As a fresh passout after his PhD in Radiophysics and Electronics from Calcutta University, he joined the Indian Statistical Institute (ISI) in Kolkata after a meeting with Dr PC Mahalanobis that gave him an opportunity to be a part of the evolution of computing in India. At 74, Dutta Mazumder is a professor emeritus at the ISI and still visits the computer department religiously everyday. DDM (as he is popularly referred to) relives the evolution of computing in India and the key role that the ISI has played under the aegis of Dr Mahalanobis

IN THE pre-independence days of our national liberation struggle, India had a galaxy of dreamers, thinking and inspiring young people not only to drive out the foreigners from the motherland but to build a strong and modern India devoid of poverty and squalor. After independence, vivisected country had many problems but India made some progress in fields like Agriculture, Education, Health, Science, Technology and Infrastructure Development, among others, with some islands of confidence in S & T such as Space Research; Defence Research & Development, Atomic Energy Development and Applications, Statistical System and Computer Science and Information Technology Development .

Possibility of dependency on technology imports or licensed-production both in private and public sectors, was foreseen in sixties by the scientific visionaries like Homi J. Bhaba, P.C. Mahalanabis, S.S.Bhatnagar, M.N.Saha and others, and tried to formulate self-reliance, and commitment to Science & Technology as a part of our National Plan Frame.

The academia and the IT industry seem to have arrived at a consensus that the mid-fifties and the decade that follow saw the beginning of the foundation of the modern Indian InfoTech Industry. Because the first automatic computer the Hollerith Electronic Computer HEC -2M from Birkbeck College London came to Indian Statistical Institute (ISI) Kolkata in 1956. In 1958 ISI got the Russian Computer URAL-1 through an UNDP Aid programme. HEC - 2M and URAL -1 are the first and second first Generation Computing Systems in India or it may be taken as first Asia in outside Japan. I joined the then Electronic Computer Laboratory of ISI in 1955, in the month of September, to work as a research worker

(engineer) to develop computing circuits/systems of my choice, and to prepare ourselves to get ready to receive and install HEC-2M

With the successful installation and utilization of two scientific computers HEC-2M and URAL, the Computer Division of ISI became the de-facto National Computing Centre of the country. The Scientists along with their real-life problems, used to visit from Atomic Energy Commission, DRDO Laboratories, TIFR, IISC, and from different Government Departments regularly used the facility with our help. Several short - term and long - term training and programmes were implemented by us, for academia, industry and Government Departments.

Looking back, the decade of sixty was the most challenging period for us at ISI, being in the cradle house of new industrial revolution, Firstly, we wanted to Leap frog from the first generation (HEC-2M and URAL) to third generation (ISIJU-I) system development, secondly, there was an anti automation movement in the country - which was actually against computers. Thirdly, the ISI Review Committee (Statutory) appointed by GOI, prepared a report recommending ISI not to engage in development of computers (Though ISI could announce inauguration ISIJU before the report was formally submitted. In the light of the Rev. Comm. Report, after futile effort to change some of the recommendations at the advice of Prof. P.C.Mahalonobis we decided to reorient our programme on application motivated research both theoretical and experimental.

In late'70s and '80s the scientists and technologists of India, both in Government and Academia felt and discussed the need for some major initiatives in the country. During Shri Rajiv Gandhi's Prime Ministership some significant Missions were launched, namely FGCS/KBCS, C-DAC, Missile Programme, C-Dot, Drinking Water Mission etc.

Transition to World Society

It is well known that computers were designed by mathematicians and engineers mainly to solve numerical problems, and even in fourth-generation computers, there has not been any significant change in that respect. However, in the world today, if we conduct a survey about the information generated as a result of the interaction between modern science and society that needs to be processed for decision-making purposes in different sectors of society, we are bound to conclude that more than 80 percent of the information is non-numerical in nature, such as natural languages, speech sounds, printed characters, cursive scripts, photographic images, ECG, EEG, EMG, x-ray photographs, CT, MR, PET, SPECT, USG etc. The computers up to fourth generation have not been able to demonstrate their processing power in a satisfactory way in these applied fields. The computer systems will have to be able to obviate these difficulties and will be used to process these non-numerical data in different fields of application interfaced with the numerical-processing capability of fourth-generation computers.

Biomedical applications: (a) ECG, and other analysis, (b) x-ray analysis, (c) diagnostics, (d) mass screening of medical images such as chromosome slides for detection of various diseases, cancer smears, x-rays, ultrasound images, and tomography, (e) routine screening of plant samples, (f) multi-modal image analysis for diagnostic and therapy planning, (g) telemedicine facilities for rural healthcare systems, (h)immuno-cybernetics approach for treatment planning and drug discovery (i) telemedicine, (j) biotechnology applications.

Applications in physics: (a) high-energy physics, (b) bubble-chamber and other forms of track analysis, (c) shape analysis, (d) image analysis.

Crime prevention and detection: (a) fingerprint analysis, (b) handwriting analysis, (c) voice recognition, (d) photographs, (e) face recognition, (f) retina signature, (g) internet security system, (h) airlines security systems, (i) different biometric system for crime and criminal detection.

Remote sensing and natural resources study and estimation: (a) agriculture, (b) hydrology, (c) forestry, (d) geology, (e) environment, (f) cloud patterns, (g) urban quality, (h) cartography, the automatic generation of hill-shaded maps, and the registration of satellite images with terrain maps, (i)

monitoring traffic along roads, docks, and airfields, (j) exploration of remote or hostile regions for fossil fuels and mineral ore deposits.

Stereological applications: (a) metal processing, (b) mineral processing, (c) biology, (d) mineral detection from microphotographs of ore sections.

Military applications: All the above six areas of applications plus (a) detection of nuclear explosions, (b) missile guidance and detection, (c) radar and sonar signal detection, (d) target identification, (e) naval submarine detection, (f) reconnaissance, (g) automatic navigation based on passive sensing, (h) tracking moving objects, (i) target acquisition and range finding.

Industrial applications: (a) computer-assisted design and manufacture, (b) computer graphic simulation in product testing, (c) automatic inspection in factories, (d) nondestructive testing, (e) object acquisition by robot arms, for example by "pin picking," (f) automatic guidance of seam welders and cutting tools, (g) processes related to very large-scale integrated circuits, such as lead bonding, chip alignment, and packaging, (h) monitoring, filtering, and thereby containing the flood of data from oil drill sites or from seismographs, (i) providing visual feedback for automatic assembly and repair, (j) the inspection of printed circuit boards for spurs, shorts, and bad connections, (k) checking the results of casting processes for impurities and fractures, (l) hot and cold rolling steel mill inspection systems, (m) coal quality analysis, (n) water quality analysis, (o) environmental quality analysis.

Robotics, computer vision, and artificial intelligence: (a) intelligent- sensor technology, (b) natural-language processing, (c) all computer-vision applications, (d) object acquisition and placement by robots, (e) designing expert systems for specific applications that require non-numerical information handling.

Management applications: (a) management information systems that have a communication channel considerably wider than current systems that are addressed by typing or printing, (b) document reading and other office automation work.

From a cursory glance at the list one can see that the objective is to enhance productivity in low-productivity areas among non standard, operations in the tertiary industries, overcome constraints on resources and energy consumption, provide for mass healthcare, education, and other support systems, and facilitate the transition to a world society. ❑

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IT : Ambience for Growth

N Seshagiri

THE SIGNIFICANT leverage provided by IT for economic growth is the result of an evolution, significantly guided by a conscious governmental planning process, towards an eventual self-guided market. Nucleated in the mid-fifties by Bhabha and Mahalanobis, nurtured in the sixties by Sarabhai and Menon, focused for growth of applications in the seventies by the Electronics Commission, the eighties and the early nineties saw government-steered liberalization, preparing the ground for the boom of the nineties, whose momentum has sustained unabated to the present day. The 1984 Computer Policy, the 1986 Software Export and Training Policy, the 1991-95 macro-economic and financial liberalization policies, the setting up of a chain of Software Technology Parks (STPs), the 1998 National IT Task Force and the National Telecom Policy created the liberalization and globalization ambience that nurtured the initiatives of thousands of IT enterprises, whose combined effort, has put India at the vanguard of the global IT and ITES outsourcing. The industry is well poised to achieve the set target of $ 50 billion by 2008.

India is still in a nascent stage in exploiting the global software and services market

The renowned German Techno-Economist, Dr Hans-Peter Brunner concluded, in his analysis of the Indian Computer Industry in the period 1975-1988, that economic performance is intimately related to the process of technological change, including the acquisition, diffusion and creation of new technologies. He advocated that technological change does not follow directly or automatically from uncontrolled market competition but from the forms of industrial organizations and governmental practices which play various intermediary roles. The neo-Schumpeterian Theory adopted by Brunner attempts to diagnose those factors of the governance of the market in India's computer industry. Later, it was discovered that the neo-Schumpeterian theory applies equally effectively in the formulation of policies for the promotion of software exports as well as local IT applications.

The author is a renowned name in IT sector. Among other assignments, he was DG, NIC (National Informatics Centre).

In the Foreword to Brunner's book of 1995 detailing the above analysis, the positive intervention and the promotion of market forces by the Government during the transition from a controlled economy to a market driven economy is outlined:

"Some analysts of the metamorphosis of the Indian economy trace the first origin of the liberalization process to the New Computer Policy brought out by the Government of India in 1984... The success of this policy can be gauged from the fact that within two years, the growth of the computer industry in India spurted from the traditional 20 percent recorded over the preceding decade to more than 60 per cent in physical growth of the market as well as the number of technologies. This turning point in the policy of the Government of India is a clear role-model of the type of neo-Schumpeterian growth regime analyzed and advocated by Dr Brunner in this book.

The success of the 1984 computer policy encouraged the Government of India to bring about liberalization step by step with the liberal electronics policy of 1985, the liberal software and training policy of 1986, the textile industry policy of 1986, the industry liberalization policy of 1987, the monetary liberalization policy of 1991, and the macro-level economic liberalization policies of 1993 and 1994".

Electronics and IT

The bold 1954 advent of the Tata Institute of Fundamental Research under Homi Bhabha that culminated in the development of a state-of-art digital computer 'TIFRAC' started the Indian journey towards the digital age. Parallel initiatives of Mahalanobis at the Indian Statistical Institute in developing the computer 'ISIJU' built up a momentum. Commercialization since early sixties by IBM,ICL and ECIL sustained an accelerating trend of applications and an industry was born [4].

The Electronics Committee set up in 1965, whose preamble was conceptualized by Bhabha and postscript concluded by Vikram Sarabhai, created an enthusiasm in the country for electronics in general and computers in particular. This provided the necessary focus for creating awareness of their political, economic and social implications in the aftermath of the war with China.

The Committee created the political and industrial ambience necessary for constituting the Electronics Commission under Prof. M.G.K. Menon.

The Electronics Commission, in turn, created a heightened visibility to these technologies with the creation of several promotional structures in the seventies including those designed for nucleating computer applications and supporting IT industry initiatives:

- The Information, Planning and Analysis Group (IPAG) was grown as a provider of technology and industry information. Hundreds of techno-economic and industry-oriented studies were carried out by IPAG.
- The Technology Development Council (TDC) became the primary funding agency for R&D Projects including a large number of projects on PC hardware and software, fiber-optics, digital instrumentation, among others which gave visibility to computer and IT applications.
- Appropriate Automation Promotion Program (AAPP) promoted industry-academicia - R&D Cooperation like the complete automation of the Seventh Blast Furnace of Bhilai Steel Plant. Later AAPP was subsumed in the Computer, Communication and Instrumentation (CCI) --Wing of DOE.
- The National Informatics Centre (NIC) set up the most wide-spread Government Computer-Communication Network in the world connecting all departments of the Central Government, all State Governments and over 500 district administrations, hosting nearly 10,000 indigenously developed databases and software packages.
- The Computer Maintenance Corporation (CMC) filled the vacuum created by the departure of IBM from India in the mid-seventies and grew up to become an innovative organization apart from the primary maintenance role.

These, among others, created a congenial atmosphere for IT to become widely accepted by the Government, industry and the public.

The regulatory role of the Electronics Commission and the Department of Electronics, as pointed out in the article in Science Reporter "had to contend with the overall national ethos of the time when profit was broadly regarded as a sin and private initiatives were tolerated as necessary appendages. In spite of this, the commission steered the best possible via-media between the public and private sectors" [3].

Proto-liberalization Policy : 1984

The 1984 'New Computer Policy', which is the forerunner liberalization concept , stirred up the traditional 20% growth rate of IT into a stupendous 60% within two years. It was based on an economic paradigm-shift called, 'Bucket out, pipeline in' [5,6,7,8].

Analogous to commissioning a pipeline to pump water from a reservoir to the fields in lieu of several people commuting to and fro with buckets, the case-by-case licensing and permits to propel the economy has to give way to autonomous self-actuating market forces. Though it took the country 37 years after independence to recognize the need for such a high-growth 'pipeline' path, the then Primer Minister Rajiv Gandhi lost no time in fully supporting the 1984 policy as a means for faster growth.

The 1984 policy took a more progressive generative view of foreign exchange rather than a narrow conservation view, liberalized the imports in appropriate directions, facilitated import of know-how with least hassles, put more weightage on promoting the applications of computers than on indigenous manufacture, setup an Inter-ministerial Standing Committee (IMSC) as a single window regulatory body, promoted software export through the liberalized deployment of Satellite Earth Stations along with a liberal import of computers against software exports and nucleated the concept of Software Technology Parks (STPs) [6].

The step-function spurt in growth of the computer industry and computer applications within two years of the implementation of the policy proved the efficacy of the 'pipeline' concept of economic growth. With a strong political will mobilized by Rajiv Gandhi in supporting sector-wise liberalization, the 1984 computer policy was followed by successive sector-wise liberalization : the 1985 Integrated Policy Measures on Electronics, the 1986 Software export and Training Policy, the 1986 Textile Industry Policy and the 1987 Industry Liberalization Policy.

Software Export Policy : 1986

The pioneering efforts of ICL and TCS among others established that software export can be a viable commercial activity. As two or three companies do not constitute an industry, a need was felt to bring out a promotional and regulatory policy framework which can grow a sustainable software export industry. Also, the 1984 policy directions for setting up STPs required the removal of several restrictive regulations and practices.

The economic principle that guided the formulation of such a policy was called,' flood-in and flood-out'. The Government clarified this concept, in an interview with Dataquest dated 22 December 1986, as follows: 'One of the principles is what is called the natural propensity and the natural intrinsic economic advantage of a country. Our natural strength is trained manpower ....at the lowest salary structures... Any new policy that is developed and is in tune with this, will lead to economic growth once the necessary conducive conditions are created. The flood-in and flood-out strategy of this policy is based on this principle'. Any software and any model of computer was allowed to flood-in through a complete decontrol of imports, while local value addition over these by local and foreign enterprises created a flood-out of software and services as exports. As a bonus, computer applications and hence the computer industry base increased exponentially.

The policy explicitly recognized services through 'body-shopping' as legitimate export. The policy elaborated on the concepts of software export using satellite earth stations as well as Software Technology Parks. In this regard, the 1986 policy stated: "Computer Software Export will include besides physical export on magnetic media or on paper, also export through satellite data link and consultancy delivered at the location of clients abroad by Indian computer expertise" [5,9,10].

Software Technology Parks

The exemplary support of the Government in the mid-eighties for setting up a satellite-link based

software export ventures by Texas Instruments , Sharad Marathe Enterprises, and Indus Corporation, all of USA, indirectly helped to break several constraining rules and practices and paved the way for similar ventures by others as well as in setting up Software Technology Parks.

The 1984 policy conceived the setting up of Software Technology Parks (STPs) through the provision; "C(3) (iv) - Software Exports shall also be promoted through satellite based data links with overseas computers. This will be carried out by DOE in coordination with the Ministry of communication / P&T Development ; C(3) (v) - The National Computer Network.... will be made available predominantly to promote software export from public and private sector enterprises with special consideration for software houses in the small scale sector" [6].

The 1986 policy gave wide ranging incentives for software export which made the STP concept more lucrative. In 1987, a Government supported STP was designed for being located at Bangalore around a satellite earth station facility and a private STP at Pune; The Ministry of Home Affairs delegated security related scrutiny to the Department of Electronics; Also, other Ministries permitted DOE to become a single point administrator for companies located in STPs. With the breakup of the CCI-wing, which was steering the setting up of the STPs, and the resultant transfer of NIC to the planning commission in 1988, the first STP at Bangalore had to await fresh initiatives of DOE taken in 1991 in setting up the Software Technology Park of India (STPI), with considerable autonomy given to it. This fulfilled the cabinet approved 1984 and 1986 policy aspirations regarding STPs.

Macro-economic & Financial Liberalization : 1991-95

A buoyant computer industry growing under the impact of the 1984 and 1986 policies, was the first to cash-in on the macro-economic and financial liberalization steered by Prime Minister Narasimha Rao and Finance Minister Manmohan Singh, with experience-backed idea and strategy inputs from Montek Singh Ahluwalia, between 1991 to 1995. Small and medium companies under the STPs flourished through an incubation effect. Companies like TCS, Infosys, Wipro and HCL grew steeply exponentially to become global players.

This growth conducive ambience helped Indian companies to cash in on the new world wide opportunities: the Internet Boom, the Dotcom boom and the Y2K problem.

Accordingly to N.R. Narayana Murthy, the 1991 macro-economic and financial liberalization enabled: Availability of financing from the equity route, speedier decision making, better foreign exchange regulations, eased entry of multinational companies, reduction and rationalization of taxes, duties and tariffs, easier and cheaper availability of data communication facility and venture financing [3].

National Telecom Policy

Recognizing that the impressive growth the country had achieved in IT since the mid-eighties is still a small proportion of the potential to achieve, the Government of India resolved to make India a global IT superpower. Considering IT as an agent of transformation which can bring about a knowledge based society, a booster dose of policies were enacted in 1998 through the National Task Force on IT and Software Development and the National Telecom Policy.

The main thrust of these policies are : Providing Internet access anytime anywhere in the country, enhancing the capability of STPs, strengthening the data transmission networks through a conducive inter-connect policy, promoting ubiquitous applications like Electronic Commerce and e-governance, enhancing the pace of PC and Internet penetration, liberating the IT Industry from all needlessly inelastic rules of the Government, providing the IT industry with more fiscal incentives like Income Tax exemptions, 100% depreciation, better availability of working capital, stock options to employees, overseas acquisition of companies, increasing the tempo of IT education and training, supporting the implementation of wired village projects etc [11].

Analysis

Between 1984 and 1990 exports went up from 25 to 105 million dollars, where as the number of companies shot up from 21 to 700. This number only marginally increased to 800 by the year 2000 [5]. The effect of the 1984 and 1985 policies was to create an industrial buoyancy in bringing the required number of companies to create further growth.

The formation of the National Association of Software and Services Companies (NASSCOM) in addition to the already existing Manufacturers Association for Information Technology (MAIT) provided the forum for not only addressing the problems and prospects within the IT industry but also to articulate the industry's problems and prospects before the Government. They became the platforms for whipping up market forces and for becoming progressively less dependent on the government for IT growth.

Between 1987 and 2000, these companies kept on growing, in a liberalized ambience, with the average revenue of about $ 150,000 per company in 1990 shooting up 50 times to 7,500,000 $ by 2000. This indicated that the 1984 and 1986 policies basically encouraged widening of the IT industry base 35 times between 1984 and 1990, whereas the macro-economic and financial liberalization of 1991-95 along with setting up of STPs, the growing private initiatives in IT education, the catalytic role of NASSCOM and, of course, the unprecedented flux of entrepreneurial energy of companies, big and small, helped to increase the revenue of these already established companies more than 50 times between 1991 and 2000.

The 1998 IT Task Force and the NTP gave the booster dose of policies as is evidenced by the fact that the number of companies between 1998 and 2004 increased four fold from about 800 to about 3200, but the companies posted a constant average revenue of $7,500,000 per capita. In other words, more opportunities for growth created only more number of companies and not more revenue per company, except for the top few like TCS, Infosys ,Wipro and HCL.

India is still in a nascent stage in exploiting the global potential of software and services market. Therefore, there is no room for complacency. If more general liberalization of the economy are put in place like better policy climate for mergers, acquisitions, liquidation and consolidation, effective full float of the rupee, better labour laws, smoother ambience for acquisition of bigger companies abroad, it is likely that, with better management, profitability and globalization, accelerated growth per company over this 3000 + company base may yet come by. ❑

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Fifty years of Indian IT

S Sadagopan

Research output from Indian academic institutions, R & D establishments is coming of age

THE GLOBAL media started writing about India positively only in the past eight years, largely due to the spectacular progress of the Indian IT industry. Y2K came as a "bolt from the blue" and a "blessing in disguise". Terms like "IT superpower" & "your job is Bangalored" and Tom Friedman's book "The world is flat" (that went on to become not a mere New York Times best-seller, but the best among many best-sellers in year 2005) brought India into the center-stage of global IT. The three software services majors Infosys, TCS and Wipro together have annual revenues of more than $ 10 billion dollars; each of them would employ nearly 100,000 employees by the end of year 2007. The number of IT/ITES professionals employed in Bangalore is just short of the combined employment of the entire State of Karnataka; the software exports from Karnataka would cross the annual budget of Karnataka next year. Global leaders in IT including IBM President Sam Palmisano, Intel Chairman Craig Barrett and Microsoft Chairman Bill Gates regularly visit India. The German software mogul SAP is planning to hold its "Board meeting" in Delhi in September 2007, something very unusual. Early this year IBM had its "Analyst Meet" in India, another unique development; IBM also announced $ 6 billion investment in India over five years.

Though the global recognition is new to India, IT has deep roots in India going all the way back to the discovery of zero! Even in the recent past. a number of developments have taken place, mostly away from the media glare. Some of them include

- Investment in education
- Nurturing excellence in key educational institutions

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- Emphasis on R & D
- Imaginative policy planning, and
- Political will to support and sustain IT across all areas.

They all helped Indian IT to grow to its current formidable position.

Role of the government

Sixties and the seventies

Homi Bhabha Committee realized the need for focus in electronics and computers; on June 26, 1970, the DoE (Department of Electronics) came into being as a scientific ministry directly under the Prime Minister with Prof MGK Menon as Secretary to the Department and Chairman of the Electronics Commission. The setting up of IIT's and IIM's in 50s and 60s and the encouragement to the private sector to start technical colleges (starting from Karnataka) helped the growth of technical manpower. Public sector ECIL (Electronics Corporation of India) manufactured 12 bit (TDC 12) and 16-bit (TDC 16) computers in late 70s and early 80s. With IBM shutting down operations in 1977, another public sector company CMC was set up to "maintain" computers (CMC had 923 computers comprising 60 models made by 34 manufacturers at one time!). Recognizing the importance of software exports, SEEPZ (Santa-Cruz Electronics Export Processing Zone) was set up in Bombay in 1973. The "Mini Computer Policy" of 1978 "opened up" computer manufacture to private sector. Many State governments created State Electronics Corporations - KEONICS in Karnataka, KELTRON in Kerala and UPTRON in Uttar Pradesh, for example. The National Informatics Center (NIC) was set up in 1977, which played a major role in the later decades to become "decision support people for the government" (both the Central and State governments)

The eighties

The "New Computer Policy" of November 19, 1984 announced by Dr N Seshagiri within 20 days of Rajiv Gandhi becoming the Prime Minister, and the "Software Policy" of 1986 kick-started the Indian IT story. NICNET in 1982 brought Internet to Government offices. ERNET in 1986 brought Internet to educational and research institutes in India. Project IMPRESS (computerization of Railways ticketing) started in 1986 as a pilot in Secunderabad ushered in the first application targeted at "aam admi" (common man). The Rangarajan Committee on Bank Computerization in 1984 set in force a movement that started to shake up government departments to improve delivery of customer service. It had to wait for the "directive" from Chief Vigilance Commissioner N Vittal that ultimately led to "core banking solutions" currently under implementation in most public sector banks today.

The nineties

Communications infrastructure improved with the setting up STPI (Software Technology Parks of India) hubs in Bangalore and other cities in 1991. The STPI Policy removed the "Inspector Raj" from software companies; the bonus of corporate tax exemption and duty-free of hardware made the Indian software companies profitable. The nineties also saw a direct "push" from the government through a number of policy measures. Some of them include

- IT Policy at every State (starting with Karnataka in 1997)
- The IT Task Force led by Prime Minister in 1999 (and several Chief Ministers at the State level)
- IT Ministry at the Centre (followed by most States) IT Fairs (like IT.com and now IT.in)
- IT Parks (starting with Cyber City in Hyderabad and ITPL in Bangalore)
- Launch of public Internet access thru VSNL on August 15, 1995
- Launch of mobile telephony on August 23, 1995

All these measures brought the right focus to IT industry. Chief Vigilance Commissioner N Vittal's directive in 1997 on full computerization of banks by March 31, 2005, led to what is perhaps the largest IT project in the country, both by way of investments and impact.

The current decade

India became the twelfth nation in the world to have an IT Act in year 2000 to address the growing e-commerce & e-business and the attendant cyber security. e-governance initiatives like

e-Seva (single point delivery of citizen services) in 2002 and Bhoomi (land records) in 2003 started the wave of g-Governance projects, culminating in a $ 2 billion (Rs 8,000 Crores) mammoth NEGP (National E-Government Project) and the setting up of NISG (National Institute of Smart Governance) in Hyderabad recently. Nearly 500,000 EVM (Electronic Voting Machines) manufactured by public sector corporations ECIL (Electronics Corporation of India Ltd) and BEL (Bharat Electronics Ltd) serving 600 million voters in 2004 general elections saw the largest deployment of IT to serve the world's largest democracy. The recent award-winning MCA 21 (department of company affairs) is truly ambitious both in scope (650,000 registered corporations filing quarterly financial statements online) and style (Rs 800+ Crores project implemented in public-private-partnership mode). VSNL got privatized (it is part of TCS today); BSNL and MTNL got corporatized leading to a far better customer service for telecom users.

Role of academic institutions

The sixties

IIT Kanpur got an IBM 1620 way back in 1963 and TIFR bought a CDC 3600 in 1965. Prof. R Narasimhan was heading the committee that recommended the setting up of Department of Electronics (DoE); he was the Founder-Head of both NCST and CMC. TIFR (later NCST) was very much involved with the growth of IT in India; along with ECIL, India saw the development of TDC-12 and TDC-16 computers in seventies, which was followed up by the manufacture of CDC machines in India.

The seventies

IIT's started Computer Science departments way back in 70's. Generations of students have learnt programming from the textbooks of Professor V Rajaraman.

The eighties

The FSTTCS (Foundations of Software Technology & Theoretical Computer Science) conference series that was started in 1981 is the longest running conference from India today; the "Malhotra-Kumar-Maheshwari algorithm" (1978) is one of the notable contributions to computer science from India

C-DAC (Center for the Development of Advanced Computing) was set up in 1988 to usher in super computing; its Param and later Param Padma series made debut into the "Super 500" list for the first time from India. Over the years C-DAC contributed to the development of computing in Indian languages, starting from GIST (Generalized Indian Script Terminal) standard and tools such as LEAP.

Special programs like MCA (Master of Computer Applications) that was planned at IIT's and launched in various universities in 80's, helped the growing Indian software industry immensely. Other initiatives in manpower development include the highly successful programs from NCST in Bombay (and later Bangalore) and the accelerated manpower development on electronics and computing through DOEACC and DRDO.

The nineties

Academic-turned entrepreneur Professor Vijay Chandru and his team designed Simputer, which became the New York Times "Technologies of the Year" in 2001. The recent "Primality Algorithm" (2005) from Manindra Agarwal and his students at IIT-Kanpur is a major academic contribution to Computer Science from the Indian research community. With the spectacular growth in Indian IT industry, there was a phenomenal growth in the quantity of undergraduate computer science (and related programs); more than 200,000 undergraduate engineers in computing and related disciplines are coming out of Indian universities today, though there is considerable room for improvement in quality.

Starting in late nineties, many of the Regional Engineering Colleges (REC) were upgraded to National Institutes of Technology (NIT) with more funding from the central government and autonomy. A string of IIIT's (Allahabad, Bangalore, Gwalior and Hyderabad) started functioning from late nineties.

The current decade

The contribution to IT from IIT alumni contributing to the global academic / research community and IT industry is well recognized today. The contribution of IIT's, NIT's and IIIT's is so important, that one can state that IT is a subset of IIT, NIT

& IIIT! In turn, it has helped in building the " India brand" and promoted entrepreneurship through organizations like TiE (The Indus Entrepreneurs Club); it has also helped in alumni contributions back into IIT's.

The industry-academia interaction has increased dramatically in the past seven years, thanks to the maturity of the Indian IT firms and the arrival of the MNC firms such as ABB, Google, HP, Honeywell, IBM, Intel, Microsoft, Motorola, Oracle, Philips, SAP, Siemens and Yahoo (more particularly, their R & D units).

The recent announcement of ACM Infosys Foundation Award for excellence in computing science shows the maturity of the Indian IT industry and their renewed emphasis on foundations and research. One hopes to see the academia industry interaction leading to breakthrough technologies and products coming out of faculty-student groups among Indian institutions.

Role of IT industry

The real impetus for global attention to Indian IT story is the contribution by the industry.

The sixties

TIFR group headed by Professor R Narasimhan (who passed away on September 3, 2007) built the first general purpose computer TIFRAC way back in 1960. ECIL (Electronics Corporation of India Ltd) was formed in 1967 to address the growing needs of electronics (including computers); ECIL manufactured TDC-12 and TDC-16 range of computers in seventies.

The seventies and eighties

In late 70's and early 80's, many pioneering companies were born in the private sector; this includes DCM, HCL, ORG, NELCO, PCL, Wipro and Zenith that built mini-computers and later PCs. There were peripherals manufacturers too - Godrej (printers), L & T (printers), LIPI (Printers), Wipro (Printers, Terminals), TVS-E (Disk drives, Point-of-sale terminals, Printers, UPS, Tape Drives) and VXL Instruments (Terminals). Much before the word "outsourcing" was in vogue Tandon was making disk drives for IBM PCs in Bombay; later PCL was making mother-boards for Dell (these pioneering experiments of the 80's withered away in 90's). Moser-Baer, the global leader in optical media emerging from India is a recent positive development in the manufacturing front.

Many software companies took birth in 80's - Infosys, Mastek, Patni, Satyam, Softek, Tata Infotech and Wipro.

Another interesting trend was the setting up of Offshore Development Centers (ODC) by multi-national corporations, starting with Texas Instruments in 1986.

There were other companies like Cognizant and CBSI (now Covansys, that is part of CSC today) that had practically all development work happening in India, though they were headquartered outside India.

The nineties

The 90's saw spectacular success of the Indian software industry. The "opening up" of the economy in 1991 led to companies like Infosys aggressively growing to become a global company with employee stock option, quarterly results on time every time, GAAP accounting and the Global Delivery Model that is today studied as Case Study in Harvard Business School. Infosys had its IPO in 1993 and listed in NASDAQ (the first Indian company) in 1999. There were interesting products too - InstaPlan from Wipro, compilers from Softek, Tally accounting software from Tally Systems and Marshal from Ramco that had global customers; the core banking software product Flexcube from iFlex Solutions has today become the market leader in the global market.

There was all round entrepreneurial activities leading to companies like VisualSoft that had the highest sale of software components, and Pramati Technologies that was featured in cover page of Java Pro magazine.

The software companies in India had outstanding achievements in quality levels; Motorola Bangalore center was the first in the world (along with Lorel Space center in USA) to achieve the SEI Level 5 level of quality. By 1999 six of the 12 SEI Level 5 companies in the world were Indian companies.

The BPO industry grew enormously in the nineties with established players Infosys and

Wipro entering the space; serial-entrepreneur Ganesh founded Customer Asset (now ICICI OneSource) and Nagarajan-founded 24x7 Customer Service merit special attention.

Software industry grew to $ 1 billion by 1995 and to $ 8+ billion by year 2000.

The current decade

Y2K proved a watershed event for the growth of the Indian software industry. Though many predicted that Indian software story will be "finished" by 2000 end, the story got more interesting in the past six years. Mindtree Consulting that was founded in 1999 grew into $ 100 million within five years; 1999-born iFlex not only got its product Flexcube ranked global No 1, but also got acquired by Oracle for nearly $ 1 billion in 2005. 1992-founded Subex Systems (now Subex-Azure) did the largest foreign acquisition by acquiring Azure Systems of UK for $ 140 million in May 2006.

Other interesting companies in the 90's include :

- networking company "Micro-Land" foraying into media business "Indya" with a big flash during dot com boom and bursting later
- new media companies "India World" (Samachar, Khel and other interesting Internet portals) that was acquired by Satyam, and,
- India-based horizontal portal "Rediff", with lots of local language content. Rediff gave 1 gigabyte storage to its users even before Google!

India had five billion dollar companies in a row - TCS (2002), Infosys (2003), Wipro (2004), Satyam (2005) and CTS (2006)! TCS and Infosys have market capitalization of more than Rs 1 Trillion in 2006. The top 3 companies alone employ more than 250,000 professionals today. 380 of the Fortune 500 companies outsource to India. Recently, there are technology companies like Sasken, Ittiam (most preferred DSP algorithm company in the world) and ImpulseSoft (that "unwired" Apple iPod) that focus on technology, IP and standards.

The entry of multinational corporations with their offshore development centers started with Texas Instruments opening its center in Bangalore in 1986. 125 of the Fortune 500 companies are present in India today. This includes global IT services majors Accenture, Cap-Gemini, CSC, EDS and IBM (with 10,000 to 40,000 employees), server majors (IBM, HP and Sun), software majors (Adobe, Microsoft, Oracle and SAP), processor majors (AMD, Intel and Motorola), storage majors (EMC, NetApp and Toshiba), graphics majors (ATI and NVIDIA), new media companies (AOL, Google, MSN and Yahoo), telecom majors (Alcatel-Lucent, Cisco, Ericsson, Nokia-Siemens and QualComm), semiconductor companies (ARM, Intel, ST Micro, Intel and Texas Instruments), EDA majors (Cadence, Mentor Graphics and Synopsys) and many R & D establishments (ABB Research, GM Research, Google Labs, Honeywell Labs, HP Labs, IBM Labs, Microsoft Research and Yahoo Research) that started with GE setting up a center in Bangalore in 2000.

Exports from Indian software industry has grown from USD 100 million (1985), 200 million (1990), 1 billion (1995), 8.4 billion (2000) to 35 billion (2006)

Role of Media and associations

The sixties and the seventies

Computer Society of India (CSI) was born in 1965 addressing the needs of the users of IT. Its annual conference is running into its 42 nd edition in 2007. CSI Annual Conventions were the places of "action" - product launches and awards through the seventies and eighties.

The eighties

Dataquest was launched in 1982 by Cyber Media publications; the same organization continues its premier magazine Dataquest today, along with other sister publications Voice & Data and PC Quest as well as the job portal Cyber Media Dice. The "DQ Top 20" issues not only profiled the "Top 20" companies, but provided details of 1,000+ companies year after year, becoming a "collector's item" over the years. The "DQ Man of the Year" and "Lifetime Achievement Award" from Dataquest are legendary. "Computers Today" was launched by the much larger media group "India Today" in 1984; unfortunately, it ceased to exist after 2002.

MAIT (Manufacturers Association of IT) was set up in 1982 to address the needs of hardware industry. The annual survey captures the essence of hardware sales in India, particularly PC sales. IT training companies NIIT and Aptech that started in 1981 and 1986 respectively.

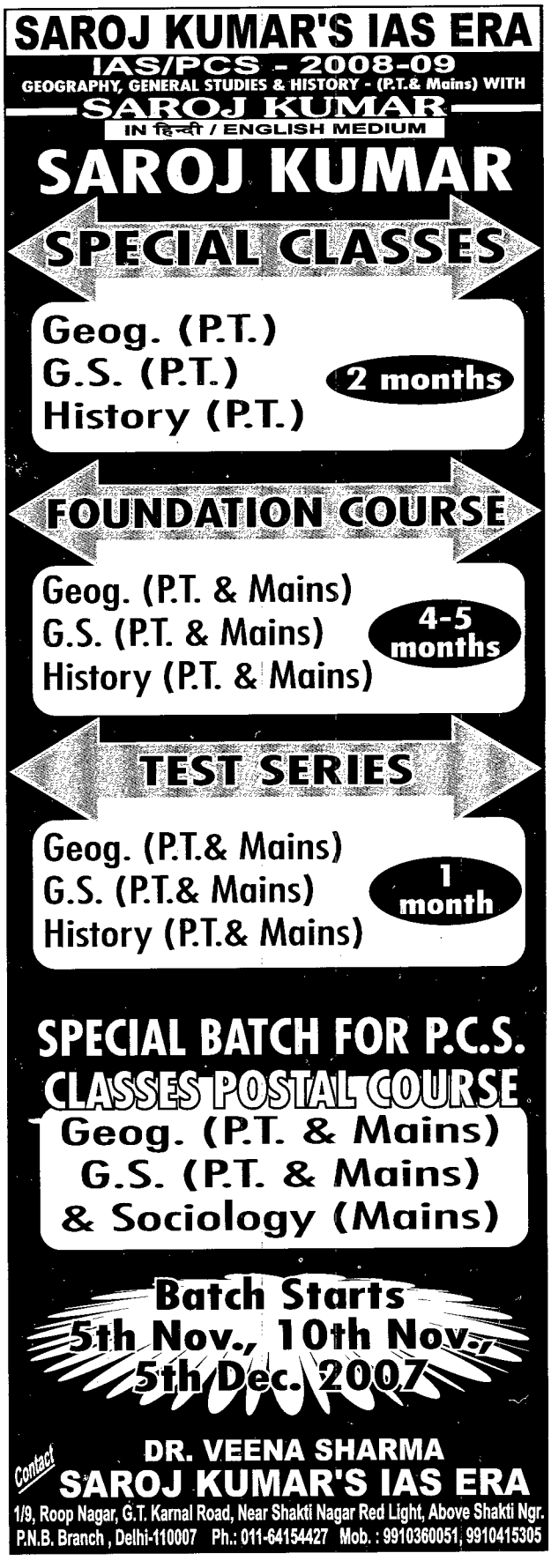
The nineties

The formation of NASSCOM in 1988 (that sprang into action from 1990) gave a fillip to the nascent software industry. Dewang Mehta during his short and eventful period as the President of NASSCOM gave the organization a formidable image and clout. Kiran Karnik the current President who took over in 2001 (after the tragic death of Dewang Mehta), put it on a high pedestal with solid events, studies like NASSCOM-McKinsey Study and an excellent support from the government. ISPAI (ISP Association of India) started in 1994 to address the needs of ISP's (Internet Service Providers). The recently formed ISA (Indian Semiconductor Association) addresses the needs of the emerging semiconductor industry.

The future

Research output from Indian academic institutions / R & D establishments is coming of age. Globally relevant and significant output is coming out of India-based research wings of global companies like HP, Microsoft and Google. TCS will be touching 100,000 size and $ 5 billion annual revenue soon. Wipro and Infosys are not far from this position. With IBM announcing $ 6 billion investment over three years, Microsoft, Cisco and EMC announcing $ 2 billion investment each, and SAP announcing $ 1 billion investment, the Indian IT industry is grabbing global headlines too. Azim Premji of Wipro, N R Narayana Murthy of Infosys and S Ramadorai of TCS are in the global list of leaders. Indian companies are acquiring global companies (Subex acquired Azure in UK); global companies are acquiring Indian companies (Oracle acquiring i-Flex Solutions, Philips acquiring Ishoni Networks and Nokia acquiring Amber Networks, for example). With VC funding crossing $ 2 billion the Indian IT story continues to be exciting. ❑

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YE - 11/07/13

IT and Administration in Government

N Vittal

As India emerges as a major economic power, IT in government will increasingly play a major role in keeping India a well governed country

INFORMATION TECHNOLOGY is nothing but a happy marriage of computers and telecommunications. In the last 50 years, it is the one technology which has grown dramatically and affected practically every aspect of life is information technology. It is therefore, natural that information technology affects public governance. Many governments are increasingly resorting to the use of information technology.

India has also witnessed in the last fifty years the increasing impact of the information technology in different aspects of governance. It is interesting that the functions of the government and the strengths of information technology seem to be made for each other. Governments as a part of their functioning have to deal with mass of data. This is because governments deal with very large number of people. Apart from the large amount of data to be processed, in order to ensure that the administration acts in a fair manner, they need to keep records. And it is the keeping of the records that leads to the occupational hazard of the governance which is cynically called as the 'red tape'. Systems and procedures are vital for any orderly government. Many a time these procedures may come to occupy so much time that they may frustrate the very objective of the governmental organization.

The delay and inefficiency in governmental system caused by red tape also lead to negative consequences like widespread corruption. Many a time, corruption starts as payment of speed money by interested parties.

The delay due to red tape results many a time in accessing

The author is former Secretary, Deptt. of Electronics, Govt. of India and former Chief Vigilance Commissioner.

to the relevant information from the mass of data and records which is time consuming. Fortunately, information technology has specific strengths so far as these special aspects of governance are concerned. Information technology and computers can process mass of data very fast. Thanks to the application of Moore's law, the number crunching capacity of the computers is doubling every eighteen months and the price has been coming down by half. As a result therefore, it is possible to process mass of data at ever lowering costs. In other words, the basic functions of government are ideally suited for applying information technology and in the process overcome some negative aspects of government functions. Information technology is also very good when it comes to speedy retrieval of information. Hence the delay that takes place in searching for precedents and keeping records can be drastically reduced.

The third aspect of information technology is increasing ease of access. The explosive growth of the internet in the last two decades had opened totally a new dimension in information technology and hence a easy access to information is another feature which is ideally suited for fair and clean public governance.

From a historical point of view, the departments and organizations which started using information technology in the early stages of the mainframes were the noun for computers were organistions like the Railways and the Life Insurance Corporation which dealt with a massive amount of data. The Railways have become excellent role model in the use of information technology by the imaginative and effective use of computers for the railway passenger reservation system in the last two decades. The ever increasing sophistication of the railway passenger reservation system has brought tremendous benefits to more than one crore passengers who use the Indian railways every day. This has not only eased the whole function of booking tickets but also drastically eliminated the scope for corruption in this part of the railway administration.

Another area of governance where the information technology has been effectively used is elections. The Election Commission of India was one of the first organizations in the world to introduce in a large country like India, electronic voting machines to speed up the whole process of voting, counting and announcing the results. The progress made by the Election Commission of India was highly appreciated when in the United States the Presidential election in the year 2000 led to a period of anxiety before the final results were declared because of the complicated manual process of counting that had been adopted in certain states of the United States.

A third example of extensive application of information technology right from the beginning is the National Stock Exchange which has evolved as the third largest stock exchange in the world after the New York Stock Exchange and NASDAQ.

While these are bright examples of the success of the application applying information technology in the governance of the country, we should also take note of the silent hard work being done by other organizations in government to increasingly use information technology to speed up and simplify processes in government and bring greater benefit to the common man. The National Informatics Centre which was part of the Planning Commission for some time has done a yeoman service in evolving the nationwide network of computers for the offices in the government of India in various departments and bringing the IT culture.

The foundation for application of technology in governance was laid by the first Indian prime minister Jawaharlal Nehru. The vision of leaders like Jawahar Lal Nehru who emphasised the need for developing scientific temper of the country and encouraged institutions of excellence like IITs and IIMs has continued through fifty years. The strongest push for computerization in India was given by Rajiv Gandhi when he became Prime Minister. In the short period he held office, he

was able to bring about a dramatic change in the approach for both information technology and the telecommunication in the country and set the pace for India marching confidently in the 21st century.

The increasing use of information technology started with e-mail but has also spread into e-governance. The department of information technology in the Ministry of information technology and communication is speareheading the transformation of the traditional government functions in to e-governance. Every year a rating is also done to indicate the degree to which the various states are ready for e-governance. Certain chief ministers like Shri Chandra Babu Naidu in Andhra Pradesh gave a special thrust to push their states into e-governance. The word SMART governance (Small Modern Accountable Responsive and Transparent government) became a catchy slogan for many state governments to apply information technology increasingly and improve the quality of governance.

Nevertheless, the basic question remains. Is it possible to substantially improve the quality of public service in government by applying information technology and also at the same time reduce corruption? One thing is very clear. The use of information technology can susbstantially reduce the scope for corruption. For instance, scams like the Harshad Mehta scam would not have taken place if there has been total computerization in the financial administration of the country. It is though the credit of the public sector banks, when the CVC gave a directive that at least 70% of their business must be computerized by the public sector banks by 1st January 2001, this target was achieved by 24 out of the 27 banks. Today the percentage of computerization in the public sector banks should be much higher, may be in the region of 80% plus. The increasing use of computerization in the banks has the double advantage of increasing the quality of service through the people and also reduce delay in the whole process. In the banking sector such delays for example in encashing out station cheques also means valuable financial resources are tied up in the system. For business enterprises, such delays would mean higher working capital requirements. The increasing computerization and modernization of Indian banking system along with the thrust for e-governance are two happy developments in the last fifty years of public administration in India.

The root cause of corruption ultimately is human greed. Even if the systems are designed to eliminate corruption, if there is any human intervention possible, corruption cannot be eliminated. For instance, in a state government the registration department was computerized. The work which used to take one month was finished in one hour. For getting that work done in one hour, the data has to be fed into the computers by public servants who continued to be corrupt and demanded bribes. Reducing human intervention if not eliminating is a method by which information technology can optimize the quality of governance.

Two things, therefore, are obvious. Firstly, when computerization is undertaken, it is necessary to ensure that there is compatibility between different systems so that the efforts done in one department to input data can be accessed by others also and as a result the access to information becomes easier. There are complaints that many a time, different softwares have been followed and as a result the data used by all departments can not be accessed by others. This defect has to be overcome. Secondly, as mentioned earlier, applying computers in government does not merely mean getting work done through computer which was being done manually. There is a need for applying the basic principles of business process of re-engineering to ensure that the systems are thought through and the benefits of information technology in public administration are optimized when IT is used in administration.

As India emerges as a major economic power on the global scene, IT in government will increasingly plays a major role in keeping India as a well governed country. ❑

(Email: nagarjanvittal@hotmail.com)

E-Governance Initiatives of Karnataka

Rajeev Chawla
Anirban Mukerji

While technology choices can influence the success of e-Governance programs but they are only enabling factors

CITIZENS OF our country face many hurdles for availing various services from the government. Firstly many times there is not much awareness of the many government services that are available to them and secondly they may not be aware of the process for availing these government services. Additionally with large distances and poor infrastructure it is also a challenge for citizens to reach far off government offices and make requests for delivery of these services. E-Governance can play an important role in providing access to government services for citizens and also making the delivery of government services speedier more efficient and transparent. Further e-governance programs can also improve the quality of internal government processes and thereby empowering the government servants to provide better quality services to the citizens

Karnataka has been among the front ranking states in adopting e-Governance and implementing several projects for improving the internal efficiency of the government and delivering better services to the citizens. Some of the landmark projects in this regard are Bhoomi, (Computerisation of Land records), Khajane (Computerisation of Treasury offices), and Kaveri (Computerisation of the registration process). All these projects have received national and international recognition. Karnataka is also in the process of implementing several other ambitious e-governance projects like establishment of rural telecentres, electronic procurement for government departments and state public sector organizations and setting up a state wide area network.

The State has also adopted the innovative model of Public Private Partnership (PPP) for implementation of e-Governance projects. This leads

Rajeev Chawla has been instrumental in e-Bhumi programme in Karnataka for which he received the Prime Minister's award for excellence in public administration.
Anirban Mukerji specialises in IT for enabling development.

to a win-win situation, with the government playing an enabling and regulatory role and the private sector entity bringing its strengths of customer focus and ability to achieve a speedy rollout of services. Projects like Kaveri, e-Procurement, Nemmadi (800 Village telecentre project) and KSWAN (Karnataka State Wide Area network) are being implemented on a PPP model. However adopting the PPP model has its own challenges, as it requires that the roles and responsibilities of both the Government and private partner are clearly laid out and Service Level Agreements (SLA's) for both parties are well defined. It also requires that the performance of both the government and the private partner regarding their responsibilities and deliverables is monitored properly.

Case studies of e-Governance projects

Some of the landmark e-governance projects implemented in Karnataka and their impact is described as under

Bhoomi

Bhoomi has been a landmark project in empowering citizens through technology by computerisation of 200 lakh land records of 70 Lakh farmers of the State. In the earlier system the land records were maintained by the cadre of village accountants who mostly issued the land record to the farmer only for a consideration. Further it was also difficult to locate the village accountant as he was responsible for 2-3 villages and did not have a fixed office. Post implementation of the Bhoomi program, the farmer just has to visit a computer centre in the taluka office and pay a sum of Rs. 15/- to obtain his land record. Computerisation of land records has also led to transparency and has made the records tamper proof. Prior to computerisation the process of "mutation" (process for effecting a change in the land record) was discretionary and depended on the whims of the concerned officials but computerisation has improved transparency in this process and has reduced discretion through innovations like First in First out process for disposal of mutation applications.

The farmers of Karnataka have welcomed the change due to computerisation. As per a study conducted by the World Bank, the farmers using the system found the Bhoomi system simpler to use as compared to the erstwhile manual system. Most users of the Bhoomi kiosks obtained their services without having to meet any official except the counter staff, in contrast with 61 percent of the users of the manual system had to meet two to four officials for their work.

Two thirds of the users of the manual system paid a bribe and needed to do so very often. In contrast, only three percent of the users of the Bhoomi system reported paying bribes. Further most Bhoomi users (85 percent) rated staff behavior at the Bhoomi kiosks as 'good'; none of the users of the manual system rated staff behavior as good.

The implementation of Bhoomi has succeeded because of many actions of the project team that has led to institutionalization of the program. Some of these initiatives are

- Abolishing manual process all together and having only a single computerized process for issue of land records and effecting changes to land records (mutation process).
- Charging user fees of Rs, 15/- for issue of land records. This amount allows the government to both maintain the existing technology infrastructure and invest in new technology when required without depending on the budgetary resources of the government.
- A large number of training programs had been conducted with the officials of the revenue department to familiarize them with the computerized process of Bhoomi.
- A Bhoomi Monitoring Cell has been established in Bangalore that continues to supervise the implementation of the program.
- There is a Facility manager to maintain and manage the technology infrastructure in the 203 offices of the state. This has ensured that there is no down time of equipment. Further young engineers are recruited from the open market on a contract basis to provide continuous hand holding and support to the revenue department officials in use of the computerized system.

Bhoomi was launched in March 2002, over the past five years numerous innovations and improvements continuously being launched. One of the important enhancements in Bhoomi has been linking of registration department with bhoomi and electronic transfer of data between the two offices. Some of the other initiatives that are

currently being piloted and are in the process of being launched throughout the state are

All land records and changes to land records due to mutations will be digitally signed by the authorised revenue officials under the IT Act 2000 of the Government of India. Thus manual signatures will not be required on the land record and an authentic copy of the land record can be electronically delivered. This will facilitate the delivery of land records through village telecentres that are being set up under the Nemmadi project.

The banks that loan money to farmers on the basis of land record will be able to electronically indicate to the revenue department that the land has been pledged to it. Thereafter once the farmer has repaid the loan, the bank can electronically release the land.

For several public projects, the government notifies land for acquisition. The land acquisition officer will now be able to put down the stage of acquisition in land records. This will ensure that land under the process of acquisition can't be fraudulently transacted.

Bhoomi has won several accolades from both national and international agencies. In 2006 the project was honored by the UN Public Service Award. In 2007 the project champion (and also the author of this article) got the Prime Ministers award for excellence in Public Administration, the first time such an award was instituted in India. The Bhoomi model of computerisation of land records has also been adopted by the Central Government's Department of Information Technology as a model for replication across all the states of the country.

The Bhoomi project despite significantly improving the delivery of land records to the citizens had one drawback. In the earlier manual system, ostensibly the citizens could obtain the land record at the village, but now they had to travel to the far off taluka headquarters to obtain the record. The state Government understood that it could not establish and operate computer centres at every village and hence decided to establish telecentres in the villages under a Public Private Partnership model. It was also apparent that these village telecentres would not be viable just for delivery of land records and other e-governance services needed to be delivered through these telecentres. The revenue department delivers a number of services to the citizens like various types of caste and income certificates, registration of births and deaths and issue of birth and death certificates and it was decided to e-enable these services for delivery through the proposed village telecentres.

There were many challenges in delivery of these services through a computerized mechanism as it was not practical to create a citizens database. Hence a merged process of both electronic and manual process was adopted. Over a period of three years, between April 2004 and September 2006, the government implemented pilots in several talukas so that the model for delivery of these services could be fine tuned prior to a state wide roll out.

Rollout of Nemmadi

The statewide rollout of Nemmadi started In September 2006 and by May 2007 about 750 village telecentres have been established across the state and currently over two Lakh services under the Nemmadi program are being delivered every month, (this despite the fact as of July 1st 2007, only a quarter of the taluka offices of the state are covered). In 2008 after completion of Nemmadi in all the taluka offices of the state, it is envisaged that about 50 - 75 Lakh services will be delivered annually to the citizens. The objective of decentralization of Bhoomi through this program has also succeeded and even now in the initial days of the project about three Lakh land records are delivered every month from the village telecentres.

In the future it is anticipated that the village telecentres will act as virtual government offices and a rural citizen will be able to avail any service that he requires from the government from these centres.

Bangalore One

The Bangalore One project provides anywhere anytime facility for payment of a range of utility bills and other citizen centric services to the citizens of Bangalore.

The Bangalore Project is the second project after E- Seva of Andhra Pradesh to provide this facility to the citizens. Other than providing a modern pleasing atmosphere to the citizens of Bangalore with spacious air-conditioned centres with comfortable seating, the Bangalore one project is based on a robust technology infrastructure and bills paid at the Bangalore One centres are automatically updated at the back end databases of the service departments. This is very important from the citizens' point of view as in case such

integration is not enabled, the citizen may have paid his bill but the department will show an unpaid status against the customer.

The Bangalore One service commenced with services only from the public sector entities like Electricity, Telephone, Water bills, municipal services but now provides services from a range of private sector entities, like payment of mobile bills of private telecom operators, booking of air tickets. Recently ING Vyasa tied up with Bangalore to enable its customers to pay there insurance premium through these centres and the facility of railway reservation has also started from Bangalore One.

Services similar to the Bangalore one project are currently under implementation in five of the largest cities of Karnataka.

Projects like Nemmadi and Bangalore one span across departments and may be called horizontal projects and projects like Bhoomi are departmental e-Governance projects. Some of the other noteworthy departmental projects are Khajane and Kaveri.

Khajane

The Finance department has computerized the treasury accounting system and connected the 250 treasuries of the state through a VSAT network under the Khajane Project. This has allowed a strict and accurate monitoring of receipts and expenditure, allows automatic generation of accounts and has stopped overdrawals thus improving the efficiency of the system

Kaveri

The department of stamps and registration has computerized the 200 sub registrar and district registrar offices in the state under the Kaveri program and today registering of any document has been reduced from 30 days to just about 30 minutes.

Both the Kaveri and Khajane projects have won National e-Governance awards.

To enable delivery of e-Governance services like Bhoomi, Nemmadi, Khajane requires establishment of core e-Governance service infrastructure like a Data Centre and a Wide area network. The first has been established and the state government is in the process of establishing a wide area network.

Karnataka has been the first state to implement the State Data Centre under the NEGP (Central Government's National e-Governance plan). Infrastructure such as the State Data centre is critical for e-Governance implementation as it provides secure data storage for the various government departments. Since the SDC is professionally managed the various departments do not need to invest in additional resources for managing their data. Since all e-Governance applications are centrally hosted it also provides the facility for integrating between different applications.

The State Government is also implementing the State Wide Area Network project and establishing about 200 Points of Presence (POP) in the entire state as part of the project. Besides providing data connectivity to all government departments, it is also proposed to set up computer centres in every taluka to enable government servants who don't have computers in their own departments to use computers and internet. Further video conferencing rooms will be set up in District Headquarters that will enable meetings to happen without requiring government servants to travel to a central point.

Other than some of the key projects described the process of e-Governance transformation of Karnataka has been far reaching. A total of 30 various kinds of e-Governance projects are in operation in Karnataka and about 88 government departments have published websites that enable the citizens to access basic information regarding these departments. Further many other important projects like computerisation of Road Transport Organisation (RTO's), Public Distribution System (PDS) Human Resource Management System of the State Government are underway that will fundamentally change both, the government processes and the way the government interacts with its citizens.

However , most people when discussing about e-Governance confine the discussion to technology, and technical terms like products to be deployed, server specifications etc. While technology choices can influence the success of e-Governance programs but they are only enabling factors. The most important process of e-Governance however involves transformation of governance and the softer issues concerning training, hand holding and change management. It is designing of these softer issues that determine the success or failure of e-governance programs and it is these difficult issues that have been successfully managed in Karnataka. ❑

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Dr. Anbumani Ramadoss
Hon'ble Union Minister for
Health & Family Welfare

Prevention of Corneal Blindness in Children and reproductive age group



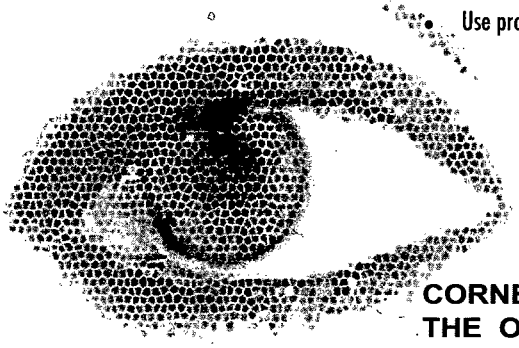
Ms. Panabaka Lakshmi
Hon'ble Union Minister of State
for Health & Family Welfare

DO YOU KNOW?

- Corneal blindness mostly affects children.
- About 30,000 corneas from donated eyes are collected against requirements of about 1 lakh corneas per year.
- Corneal blindness can be cured only by corneal grafting from donated eyes.

SIMPLE STEPS FOR PREVENTION OF CORNEAL BLINDNESS

- Provide supplementary dose of Vitamin A solution to all children below 6 years of age, educate mothers on nutrition of children.
- Give all vaccinations to children as per schedule.
- Prevent eye injury, keep sharp articles away from the reach of young children.
- Do not self medicate eye infection-consult eye specialist.
- Discourage games like bows & arrows, gully danda, use of chemicals in Holi, Crackers in Diwali.
- Use protective goggles in hazardous industries.



CORNEAL GRAFTING FROM DONATED EYES IS THE ONLY TREATMENT TO CURE CORNEAL BLINDNESS

- Consent to donate eyes of your close relatives and friends.
- Motivate family members of the person who has died in your area for donating eyes.
- Let Eye Donation be your family tradition.
- Popularise Hospital Corneal retrieval programme.

Make Eye Donation a Family Tradition

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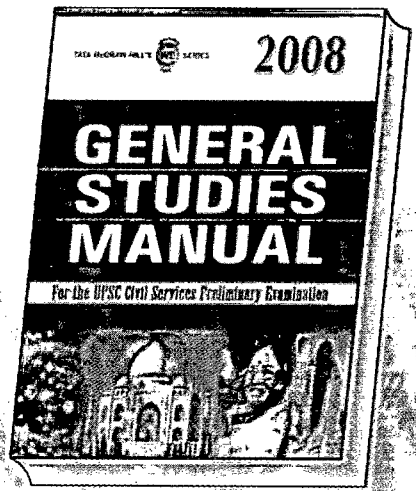
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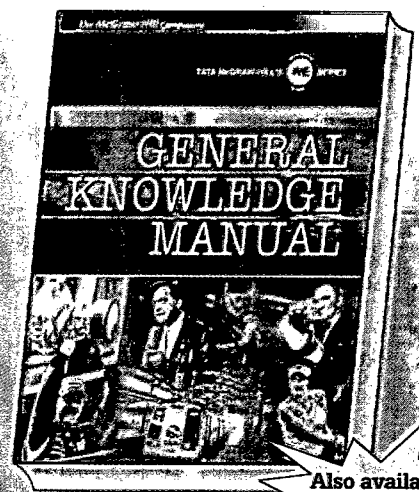
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YE - 11/07/17

The IT Journey

1956-1965
The Beginning

India gets first digital computer. Vikram Sarabhai sets up the Operations Research Group. IIT-Kanpur starts computer science education. Electronics Committee set up under Dr Homi J Bhaba

1956: The first digital computer comes to India, as the Indian Statistical Institute in Kolkata installs a Hollerith Electronic Computer, HEC-2M, brought from England. Initially, it handled a number of scientific problems from all across the country including trajectory analysis for artillery cannons for the Defense. It was, in fact, the first computer brought to Asia, outside of Japan.

1958: ISI installs the URAL digital computer brought from Russia with a grant from United Nations Technical Assistance Board (UNTAB). Both HEC-2M and URAL were used by ISI till 1964 when IBM installed the 1401. Dr Dwijesh Datta Majumder, Prof M M Mukherjee and Prof Amaresh Roy were the pioneers in running both HEC-2M and URAL.

1962: The Defense Ministry sets up a Computer Center under Major General Balasubrahmanian (then only a major) from the Army Services Corps; he is also appointed technical secretary of the Advisory Group on Computers in Defense.

1963: Under the guidance of the eminent economist, John K Galbraith, IIT-Kanpur becomes the first institute in India to start Computer Science education on an IBM 1620 system, then a novelty even in many North American and European universities.

- Following the Chinese War, the Government feels the need for a strong indigenous electronics base for security and national development. Sets up an Electronics Committee under the Chairmanship of Dr Homi J Bhaba.

1965: The Computer Society of India (CSI) founded in Hyderabad with Prof. R Narsimhan as the Founding President and Major General Balasubrahmanian as the Founding Secretary. The first CSI Convention is organized in Kolkata.

1966-1975
Committees & Bodies

DoE set up with Prof MGK Menon at the helm. Commercial computer installations exceed 100. Tata Group buys mainframe, computing starts in IIT-Bombay with Minsk II. Tandon makes magnetic recording heads for floppy drives

1967: ECIL set up in Hyderabad with Dr A S Rao as the Founding MD.

- 10 Honeywell computers installed at the Department of Statistics, Cabinet Secretariat.
- Computing starts in IIT-Bombay with the arrival of the Minsk II computer. Prof J R Isaac spearheaded the initial efforts in setting up the Computer Center assisted by five faculty members.

1968: The National Conference on Electronics convened by the Electronics Committee wherein Vikram Sarabhai suggests the formation of a National Informatics Organization.

1969: IBM 1401 installed at Planning Commission under a grant from Ford Foundation.

- Number of computers installed in India crosses 100.

1971: Electronics Commission constituted in February in Bombay under the Chairmanship of Prof MGK Menon.

- The Information, Planning and Analysis Group (IPAG) of the Electronics Commission constituted in October in Bombay, with Dr N Seshagiri as its Director.

1973: FERA regulations enacted by Indira Gandhi, it would ultimately cause the fracas leading to IBM's exit from India.

1975: CMC incorporated as Computer Maintenance Corporation Pvt Ltd.

1976-1985
The Big Blue Impact

IBM exits India. Nadar makes history with HCL. Narayana Murthy launches Infosys. NIIT comes into existence. India's first IT publication-Dataquest-launched. first multilingual word processing system commissioned. Indira Gandhi invites Sam Pitroda to set up C-DOT. Wipro enters computers. South Eastern Railway in Calcutta gets computerized. Unix hits the country.

1976: The youngest head in DCM DP's history, Shiv Nadar quits and with six other friends starts Microcomp with a capital base of Rs. 1.75 lakh. The company is rechristened Hindustan Computer Ltd and history is made.

1977: National Informatics Center set up with UNDP assistance, Dr N Seshagiri is director general.

1978: IBM exits from India on June 1, as it could not agree with FERA regulations. According to many, the first era of Indian IT history comes to an end.

1980: Azim Premji makes Wipro enter into IT with India's first computers.

1981: NR Narayana Murthy, a software professional working with Patni Computer Systems in Bombay, launches a data center called Infosys in a Pune garage with six friends for Rs 10,000

- Rajendra Pawar, Vijay Thadani and S Rajendran start NIIT from humble beginnings in Safdarjung; it later becomes synonymous with computer training in the country.

- India's first computerized coronary care unit for automatic monitoring of heart attack patients set up at the Lohia Hospital in Delhi.

- St. Columbas School, New Delhi becomes the country's first school to acquire a computer in 1981-the HCL System 2.

1983: Dy Governor of RBI appointed as the Chairman of the Rangarajan Committee, formed to advise the government on the computerization roadmap for nationalized banks. Though an agreement is signed between the employees union and the bank management, the National Organization of Banks expresses shock over the decision.

1984: New Computer Policy announced on November 19, days after Rajiv Gandhi assumes power. For the first time, IT industry is accorded a special position. Among other things: import duties for peripherals reduced, foreign equity participation was allowed, import of computers was liberalized and software got recognition as a separate industry.

- Government launches the CLASS (Computer Literacy and Studies in Schools) project with much fanfare.

- Indira Gandhi invites Sam Pitroda from the US to set up the Center for Development of Telematics (C-DOT).

1985: Rangarajan Committee Report on bank computerization is released, Stage I is to cover 2,500 branches and Stage II, 6,000 branches.

1986-1995
Framing Policies

The first Software Policy. Enter the MNCs. Sivasankaran launches Rs 29K PC. Nasscom is born. Seeds of offshore outsourcing sown by Jack Welch. First supercomputer-CRAY installed. VSNL starts email and Internet services. IBM's re-entry.

1986: Government announces the first software policy on December 19; few key guidelines include making the export commitment of software exporters

more stringent, defines software exports as 'body shopping', de-licenses the domestic industry, lays emphasis on training and open up import of software.

1987: The entry of the MNCs through a host of tie-ups with Indian partners: Apollo through HCL, Bull through PSI Systems and DEC through Hinditron Computers.

- Wipro becomes the first company to receive a DoE certificate for its products.

1988: Nasscom is formed, thanks to the efforts of Harish Mehta, Saurabh Srivastava, Prakash Ahuja and Shashi Bhatnagar, with the aim to become a catalyst for the growth of a software-driven IT industry in the country. The move was spurred by software companies who were unhappy at the representation being provided by MAIT.

- Vijaya Bank becomes the first nationalized bank in the country to introduce ATMs.

1989: Jack Welch meets Sam Pitroda and Jairam Ramesh over a breakfast meeting and the seeds of offshore out-sourcing of software services to India were sown. GE's tryst with India started in right earnest in 1991.

1990: India gets its first supercomputer as the CRAY XMP-14 is installed at the Department of Meteorology.

- The UK- returned accountant-turned award winning documentary film-maker cum graphic designer Dewang Mehta is hand picked by Harish Mehta and appointed Executive Director of Nasscom.
- N Vittal takes over from R Rajamani as DoE Secretary. He was instrumental in liberalization of the Indian computer industry. Reduction in telecom charges for satellite links, exemption from profit tax on software and services exports, zero excise rates from software sold were some of his recommendations.

1992: Return of the prodigal. IBM comes back to India via Tata Information Systems Ltd, a 50:50 JV with the Tata Group.

- India refuses to sign NPT with the US restricting the sale of advanced computers to India.

1993: Visa restrictions imposed by the US Government. Instead of B1, you now needed to take an H1-B which was much more difficult to get.

- Indian software professionals brought under the ambit ot the Immigration Act of 1990. Under the Act, they would have to pay social security taxes amounting to 21% to the US government.

1994: The National Telecom Policy, NTP-94, is announced. India's first national information highway is inaugurated.

- Wipro sets up R&D center in the US; Infosys too opens a US subsidiary.
- HCL HP delivers India's first Pentium machine.

1995: India's first cyber cafe opens at the Leela Kempinski in Mumbai.

- Railway reservation system in India goes entirely online.
- VSNL launches India's first full Internet service for public access, the Gateway Internet Access Service (GIAS). It was available immediately from Bombay, Delhi, Calcutta and Madras and subsequently Pune and Bangalore. Users from other locations connected through the I-NET, an X.25 network accessed through leased lines or at a concessional dial-up rate from almost anywhere.
- Apple Computer sets up a fully-owned Indian subsidiary.
- Union Cabinet approves the formation of TRAI.

1996-2005
Global Impact

HCL HP becomes HCL Infosystems. National IT Task Force formed. The Indian dotcom boom and bust. VC concept gains currency. Infosys lists in NASDAQ. Premji becomes world's richest Indian. 100% FDI for the Industry. Dewang Mehta passes away and Kiran Karnik takes over as Nasscom president. Nandan Nilekani takes over as Infosys CEO. Indian software companies cross the billion dollar barrier.

1996: Rediff.com is launched by Ajit Balakrishnan and friends, it goes on to become India's premier dotcom.

1997: MNCs overtake local brands as Compaq and IBM replace HCL HP and Wipro as leading PC vendors.

1998: The National IT Task Force formed by the Government of India. Its 108 recommendations are accepted in a record time.

- C-DAC under Dr Vijay Bhatkar builds PARAM 1000, India's first indigenous supercomputer.

1999: Infosys becomes the first Indian company to get listed in the NASDAQ.

2001: Dewang Mehta passes away; Kiran Karnik takes over as Nasscom President.

2002: Nandan Nilekani takes over as Infosys CEO from Narayana Murthy.

- Microsoft India kicks off Project Shiksha in schools.

2003: Bharti signs landmark IT outsourcing deal with IBM.

- Wipro acquires Spectramind in the biggest BPO deal till date.

2004: Both Chandrababu Naidu and SM Krishna lose elections; a big disappointment for all pro-IT politicos, as the IT initiatives in the two states initially lose steam, best exemplified by the closing down of the Bangalore Action Task Force. Industry leaders concerned about Bangalore's deteriorating infrastructure.

2005: The image of Indian BPO takes a major hit as data theft scandals hit the country one after the another- it started with MphasiS in Pune, continued with the Sun sting operation, then Intelenet and HSBC among others.

- Wipro and TCS lead Indian companies on an acquisition spree across the world. ❑

(*Source:* DATAQUEST, December 2006)

Creator of India's First digital computer passes away

From about 1960 to 1964, India's first indigenous digital and general-purpose computer occupied a massive air-conditioned hall across the second floor of the Tata Institute of Fundamental Research (TIFR) in Mumbai.



Dr Rangaswamy (centre) with Jawaharlal Nehru

Albeit far slower than today's super-computers, it was nonetheless, a break-through then. On Sept. 3 in Bangalore, its designer Dr Rangaswamy Narasimhan passed away, ending a legendary era that ushered in India's age of computing.

Both the computer and its creator now remain only in a few golden memories. In 1962, Jawaharlal Nehru came to christen the unwieldy computer TIFRAC.

Its prototype is said to exist in a museum in Delhi. But soon after 1964, TIFR researchers lost track of what happened to the original machine.

"The core memory was later gifted to the Bhabha Atomic Research Centre (BARC), and its parts were dismantled and sent to the Indian Institute of Science (IISc), Bangalore. But did not preserve it either," says retired professor M.V. Pitke who joined Narasimhan's group in 1959.

"It is a pity the computer was not preserved", said the Mumbai-based Pitke. "It will be very difficult for today's generation to imagine that state of technology".

Early mornings, Narasimhan would proudly polish the cabinet doors of the laboratory that was a national facility until 1964.

"He put India on the world map of computer labs", recalled Pitke, "We were then behind the US and Europe by only 4-5 years. But after proving we could build complex electronics, We frittered away that advantage".

Computing was then primitive, and a small computer used several kilowatts. The historic computer had a tele-printer and punched card devices for heavy databases. ❑

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A. I joined **Mr. M K Mohanty's SYNERGY** for **Public Administration**. It's the best institute for Public Administration. **(Pratiyogita Darpan Aug-07 Issue)**

Q. Do coaching institutes help? If yes, how should one select, when there are so many of them?

A. I was a student of **Mr. M K Mohanty** of Synergy. For **Public Administration**. I can say that it is best institute for Public Admn.Definitely coaching institutes play a major role in the preparation by providing guidance, writing skills, personality devel-opment, useful materials and above all the required confidence to the candidates.

(Competition Wizard September-07 Issue)

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YE - 11/07/03

Economic Freedom

Suvendu Ganguly

ECONOMIC FREEDOM is defined as the extent to which economic activity can be pursued without interference from government. Economic freedom is built upon personal choice, voluntary exchange, the right to keep what one earns, and the security of one's property rights.

The annual Economic Freedom of the World Report, published by the Fraser Institute, based in Canada and set up in 1974, uses the above definition and, in conjunction with members of the Economic Freedom Network, ranks countries on their level of economic freedom. This network, is made up of public policy institutes from around the world who are dedicated to the study and advancement of economic freedom. The index that is a comprehensive one, constructed under the leadership of the Fraser Institute and Nobel Laureate, Milton Friedman, and is said to be the most objective and accurate measure of economic freedom published to date by any organization.

Incidentally, the Fraser Institute and the Oman-based International Research Foundation (IRF) are also working together on a project sponsored by the John Templeton Foundation to identify and celebrate those who succeed in improving governance and entrepreneurship in the region. The goal is to publicize these examples and show how Arab entrepreneurs through their own efforts are able to bring new prosperity and jobs for themselves, their family and their community. The project is now in its early stages.

Oman ranks first in the Overall Arab Economic Freedom in the region tied with Lebanon and this is because of the high performance across the five components of the index. Oman is also ranked by the Fraser Institute as the 17th most economically free country in the world. The basis of that ranking was an assessment of third-party information from almost 130 countries on five measures of economic freedom: size of government, rule of law, sound money, freedom to trade and regulation. The sound money component looks at how purchasing power holds up over time, in the sense that government can steal property by stealth through an inflation tax. Oman has a very low inflation rate and low rates of money growth that keep inflation contained over time. The country's citizens also have a high degree of freedom to hold their funds in foreign currencies and in foreign bank accounts. Over time, all this means that governments are prevented from stripping away economic freedom through a depreciating currency.

In its report, the Fraser Institute has ranked India 69th among 141 countries which is a slip from 60 in 2004 but an improvement from 80 in 1990. The rating on a scale of 10 improved from 4.9 to 6.6. This is one of the largest increases in the last 15 years of any country. Among the five components of the EFW index, the largest increase for India is in 'Freedom to Trade Internationally,' where India's score improved to 7.0 in 2005 from 3.9 in 1990. Factors like lower unemployment, higher per capita GDP, higher income for the poor characterize nations with high level of economic freedom. As a global index, the index measures the degree to which policies and institutions of these countries are supportive of economic freedom, which includes elements like personal choice, voluntary exchange, freedom to compete and security of privately owned property.

The author is Joint Director, Ministry of Water Resources, Govt. of India.

Despite a slight improvement in the overall economic freedom, India's world ranking has fallen. This shows that the other countries have improved their economic freedom more than India has. The example of Oman has been given. It further shows that 8 of the 10 worst performers in economic freedom are African countries, where "people continue to suffer from dire poverty." The report indicates that there is a strong connection between economic freedom and common well-being. Countries with higher economic freedom have higher average per-capita GDP and average per-capita economic growth. Importantly, the poor are also better off in countries with higher degrees of economic freedom, resulting in the average income of the poorest 10 per cent of population in these countries being higher than the countries with lesser economic freedom.

Does the concept of index of economic freedom pose any paradox? Well, it does, sometimes. For instance, Chhattisgarh ranks fourth among states in terms of economic freedom while Punjab is 17th. Again, Punjab can be fourth in terms of economic freedom and Chhattisgarh 19th. Really, both statements are true and the definition of economic freedom becomes important here.

Two indices ranking Indian states for economic freedom -- both titled Economic Freedom Index for India (EFII) -- using different definitions, throw up some interesting results.

In the first index (EFII-1), economic freedom is defined as an individual's unfettered ability to make economic choices unhindered by external forces, whether government or society. Thus, they broaden the scope of economic freedom from the conventional definition relating to the absence of restrictions on and heavy-handed government presence in economic activity - the definition used in the index used by the Fraser Institute and another index used by the US-based Heritage Foundation to rank nations.

The EFII-1 uses 50 measures, a mix of economic and social indicators, grouped into 13 categories:

- The ability to make a choice (poverty levels, health indicators, type of houses, electricity and sanitation).
- Social and family biases (sex and literacy ratios as well as caste differentials in education).
- Lack of available choices (rate of economic growth, employment, work participation levels and so on).
- Lack of information (access to newspapers, telephone, mobile phones and television).
- Lack of physical mobility (access to roads, availability of buses and ownership of cars/two-wheelers).
- Lack of ability to process information (access to education and teacher-pupil ratio).
- Safety, law and justice.
- Efficiency of governance.
- Limits on trade (market fees, licence fees for traders, the number of haats/mandis and regulated markets).
- Constraints on realizing full returns from effort (basically, taxes).
- Limits on control over own business (industrial relations scenario, power shortage).
- Issues in buying and selling of land/assets (taxes on property and capital transactions, stamp duty rates and so on).
- Availability and cost of capital.

Tamil Nadu tops the economic freedom charts in the EFII-1 followed closely by Maharashtra, Gujarat, Punjab and Andhra Pradesh in that order. Bihar ranks 20th. Though Maharashtra is better placed in traditional economic freedom indicators with better industrial relations scenario, larger numbers of regulated and unregulated markets and lower tax-state domestic production, Tamil Nadu edges past to the top due to its social and governance indicators; precisely why West Bengal with a higher economic growth rate and lower state taxes ranks below Kerala because of its low work-participation rates and poor law and order situation. However, its excellent social indicators put it among the top 10 economically-free states.

What happens when states are ranked according to the conventional definition? A just-completed but yet unpublished second sub-national index (EFII-2), draws upon the Fraser Institute's index and classifies 26 indicators under three groups:

- Size of government (government revenue expenditure, power subsidy, state level taxes and government employment).
- Legal structure and security of property rights (quality of legal infrastructure, completion of cases, violent crimes and economic offences).
- Regulation of credit, labour and business (wage levels, man days lost, licence and market fees, implementation of industrial entrepreneur memorandums (IEMs) and so on).

This has Gujarat, Andhra Pradesh and Kerala on the first three rungs while Chhattisgarh ranks higher than Tamil Nadu and Maharashtra. The top five states in

the EFII-2, barring Kerala, have small-size governments. Tamil Nadu does well only in the second parameter, where it ranks first, followed by Madhya Pradesh, Kerala and Haryana. Surprisingly, the top five economically-free states fare average to poor in the third area, where Maharasthra leads, with Kashmir, Orissa and Jharkhand at its heels. The structures of the two indices reflect the classic debate between positive (freedom to) and negative (freedom from) freedoms although there is no clear consensus on what counts as positive freedom and further, the inclusion of positive freedoms in the index may lead to the assumption that the government must provide these freedoms. The negative view of freedom is conceptually clearer and gives a more structured way of measuring freedom.

Inclusion of most of the components in EFII-1, it is also argued, will cause freedom to be confused with development. The EFII-1, however, counters by stating that in India, family, community and social constraints are equally restrictive of individual freedom as state-imposed restrictions. For example, it is pointless to say anyone is free to set up an enterprise anywhere if that freedom is curtailed by the lack of roads or power or social restrictions on women and those from the lower castes.

Both indices shatter a few myths though. Kerala being in the top 10 in both really does impress as does Uttaranchal and Kashmir ranking higher than Haryana in the EFII-1 and West Bengal ranking three points above Punjab in the EFII-2. The problem is compounded by the lack of hard data on many issues. For example, labour market rigidities may be best captured by proxy variables - the number of applications filed by companies for retrenchment of workers (required under the Industrial Disputes Act), the number of approvals by state governments and the time taken for approvals. However, this data is available for only five states. Similarly, ease of doing business is best reflected in the number of licences/clearances required by each state for setting up a business. But that's hard to capture as well.

Heterogeneous states with disparate inter-regional development fare poorly compared to homogeneous states where prosperity and poverty are more evenly distributed. That explains the huge difference in rankings between Punjab and Haryana -- twin states for all practical purposes in both indices.

Both studies find that the more economically-free states are also more prosperous, but have fought shy from arriving at any conclusions about causality -- whether economic freedom leads to stronger economies or whether stronger economies result in more economic freedom. And so the argument continues. ❑

(E-mail: suve70@gmail.com)

India 69th on Global Eco Freedom Index

India has secured an all-time high rating of 6.6 on a scale by of 10 in the index of Economic Freedom of the world for 2005 and has been ranked 69 out of 141 countries. The ranking, though, has slipped from 60 in 2004.

The index, prepared by the Canada-based Fraser Institute, was released by Commerce Minister Kamal Nath, who said the country was following a path of economic reform which was tailor-made to suit its particular needs.

"Significantly, this is the highest increase in rating registered by any of the 141 countries on the index in the past 15 years. Though India is ranked higher than countries like China (86), it lags behind third-world.

Countries like Botswana (38) and Mongolia (44). The highest rank is secured by Hong Kong, followed by Singapore and New Zealand.

"The report shows that though India is doing well in pursuing economic reforms, other countries are doing even better", said Parth J. Shah of Centre for Civil Society, one of the partners involved in the preparation of the index.

"When we talk about economic freedom, it has to be tempered with social justice for a country like India. No one will accept inequitable growth in the country. We should also look at institutional freedom enjoyed by bodies like Securities Exchange Board of India and Telecom Regulatory Authority of India as well as the judiciary. This is what has brought us in the global radar," Nath said, after releasing the report.

The report took into account parameters like size of the government, legal structure and security of property rights, access to sound money, freedom to trade internationally and regulation of credit, labour and business.

BOTTLED WATER

ANALYSIS

It Costs us the Earth

Sunita Narain

The bottled water industry is global in nature. But it is designed to sell the same product to two completely different markets: one water-rich and the other water-scarce. The question is if this industry will have different outcomes in these two worlds? Or will we, for two opposite reasons, agree that their business costs us the earth and that it is not good for us?

In the water-and economically-rich world, the bubble is bursting. Last month, San Francisco's mayor banned the use of bottled water in government buildings, incriminating billions of disposed plastic bottles that filled landfills in the US state. In the US, a staggering 60 million plastic bottles are thrown away each day, a minuscule proportion of them are recycled. Greenhouse gas emission from trucks which transported the bottles across the state-and often across countries-was also cited as a reason for the ban.

But equally importantly, the mayor stressed that his city's municipal water came from pristine sources inside a national park. This was as good, if not better than bottled water sold by companies, he said.

He is not alone. Last year, Salt Lake City's mayor asked public employees to stop supplying bottled water at official events. And now New York has launched a $1 million campaign to encourage people to drink its famously clean public water. Another slap has come from topnotch restaurants, who in reverse snobbery, are refusing to serve bottled water. Only tap water makes it to their expensive menus.

But the worst is coming. Last week, junk food giant pepsi was forced to admit in the U.S that its brand of bottled water, Aquafina, is nothing more than tap water. Under pressure, it has even agreed to label its bottles to say precisely this.

The bottled water industry is in damage control mode. But I believe that this scream could easily become a shout as people realise the environmental cost of this product and more importantly, they see the sheer stupidity of paying hugely for some thing that is readily available.

In our world too, the bottled water industry is growing big time. The demand has increased from two million cases in 1990 to an estimated 68 million cases by 2006. But in India, bottled water is growing as an item of necessity: private industry is meeting the drinking water demand left increasingly unfulfilled by public utilities. In most cases, people are paying prices that they cannot afford to because they have no alternative source of clean drinking water.

It is the subsidy to the rich which is leading to poorer and poorer delivery from water agencies

In India, this water does not come from municipal taps. It comes instead from groundwater that invariably is also used by villagers. Companies simply drill a hole in the ground, pump and clean (sometimes) the water before bottling and then transport it to cities. Simply put, this is the privatisation of drinking water.

The only real cost in this business is the container-plastic bottle and the cost of transportation. The fact is that bottled water is no different from water that should come from our taps. The only difference is that it is packed in plastic and not conveyed in pipelines. But while the rich in India can afford to buy and drink bottled water, the poor cannot. In other words, the rich have the choice and they opt out of the failing municipal systems.

However, what is not said is that water systems in India are failing because the rich in the country, those who can afford bottled water, are still supplied water at tenth of what it costs the municipality. Worse, our wastewater is conveyed and pumped from our homes and even treated (at times). None of this cost is recovered. In other words, it is our subsidy which is leading to poorer and poorer delivery from water agencies. It is we, who have options to drink bottled water, who are failing the system.

I am not even talking here of the mountains of plastic waste of this industry, which we use but don't pay for I am talking here of the imperative that we should fix water for all in all taps. Water in bottles costs the earth everywhere. ❑

(Courtesy : Business Standard)

Downside to Bottled Water

Devinder Sharma

The next time you buy a bottle of drinking water, you need to pause and think. I know you wouldn't even bat an eyelid shelling out Rs 15 for a litre of bottled water. But what you do not realise and that is why you need to think is that you are actually paying over 4,200 times of what you normally pay for a litre of tap water.

The economics of drinking water has always baffled me. The business of bottled water is still more intriguing. What is perplexing is that the same class of people-the average urban middle class-squirms and protests if the Delhi Jal Board, for instance, tries to "nominally" raise the price of tap water, Paying a little over one paise for three litres of tap water (DJB) prices tap water at Rs 3.50 per 1000 litres) they feel they are already being made to pay through their noses.

At home, they want to get water almost free of charge. They think it is their fundamental right, and any upward revision in the pricing of water is an infringement. The moment they step out of home, they realise that any claim to human right will not quench their thirst. They pay, and pay through their pockets. In trendy restaurants, they end up paying even more. No questions asked, no scope for protests. Nor have I seen anyone seeking an economic justification for the hefty price bottled water is priced at.

Price being of little constraint for consumers, the global bottled water industry is galloping. In 2004, the world consumed 154 billion litres, of which India's share was 5.1 billion litres.

Expected to grow at 40 per cent annually, the Rs. 1800-crore bottled water industry is in the midst of an unprecedented boom. Bottling water is becoming a brisk business with over 1200 water factories scattered throughout the country. That is why within a short span of five years-between 1999 and 2004- India's consumption of bottled water multiplied almost five times. India now is amongst the top ten bottled water consumers.

Blame it on the safety and quality of the pipe water supply, the fact remains that municipalities are faced with an unprecedented resource crunch. The quality of tap water can certainly be enhanced to the level of filter water provided the consumers are willing to pay more. After all, we have no reason to complain about the quality of piped water supply if we are spending only one paise for every three litres of water.

If you think bottled water assures you of purity and safety, it is time you think again. With over 2000 companies seeking ISI certification form the Bureau of Indian Standards (BIS), the quality of bottled water supplied remains under a scanner. Studies have already shown that the quality of bottled water often fails to meet the prescribed standards. In the U.S, one of five states has actually no regulations for bottled water. In India, the BIS has no mechanism for inspecting the quality of bottled water.

Shockingly, what is little known is that more than five litres of water is required in the manufacturing process for every litre of packed water. In other words, 770 billion litres of water were used to produce and pack the 154 billion litres of water that the world consumed in 2004. In India, 25.5 billion litres of water were wasted in 2004 in the same process. What a colossal waste of water by any standards.

Bottled water also has additional hidden environmental costs. According to the Pacific Institute in California, the entire process of making plastic for the bottles requires huge energy. In America alone, where nearly 26 billion litres of bottled water was consumed in 2004, an equivalent of 20 million barrels of oil was required every year to manufacture and transport the bottles. The accumulation of plastic bottles in the landfills also adds to global warming besides contaminating the groundwater.

But is there a silver lining? Are people beginning to see the damage being done by the bottled water industry? Yes, more and more people are now awakening to the threat. A number of restaurants and hotels in the United States for instance have begun to serve only filtered water to customers. Some of them have even taken off bottled water from the menu. Restaurants in Minnesota, Salt Lake City and else-where have taken the lead. It is time the top restaurants and five-star hotels in India too set an example.

City authorities are also waking up. More recently, in San Francisco, Mayor Gavin Newsom has through an executive order issued in July banned city departments, agencies and contractors from using city funds to serve water in plastic bottles and in larger dispensers when tap water is available. His argument is that for the price of one litre of bottled water local residents can purchase 1000 litres of tap water. Prior to him, the Mayor of Salt Lake City had also issued a similar notification. Is is not time to launch a similar initiative in India? ❑

(Courtesy : Deccan Herald)



United Nations Honours Gandhiji's Ideals

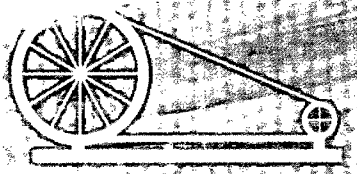
October 2nd declared as International Day of Non-Violence

Let us rededicate ourselves to the path shown by the Father of the Nation

India of my dreams

I shall work for an India in which the poorest shall feel that it is their country, in whose making they have an effective voice, an India in which there shall be no high class and low class of people; an India in which all communities shall live in perfect harmony. There can be no room in such an India for the curse of untouchability, or the curse of intoxicating drinks and drugs. Women will enjoy the same rights as men. We shall be at peace with all the rest of the world. This is the India of my dreams.

-Mohandas Karamchand Gandhi





Ministry of Information & Broadcasting
Government of India

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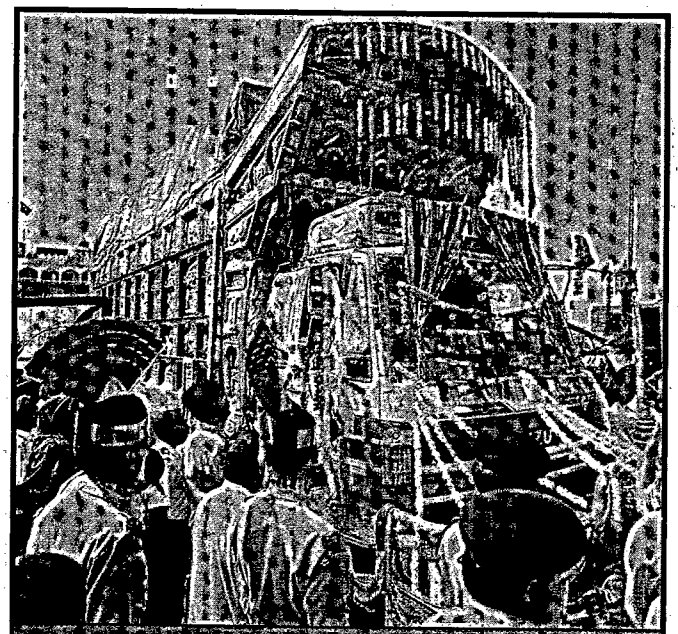
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J&K WINDOW

Cross-border movement of trucks at Wagah to boost trade

The implementation of the decision by Pakistan and Indian authorities to allow cross-border movement of commercial vehicle from October 1, 2007 would not only help in boosting the trade but also help in fast clearance of goods. Presently, due to movement of VIP and other factors, trade often comes to a halt as there is only one gate for export, import and passenger movement.

It has been decided that the trucks would be allowed into Indian or Pakistani territory from Wagah between 7:30 in the morning to 2:30 in the afternoon from the existing gate. Also, in the offing are integrated check-post at the Wagah border, a cargo complex, improving infrastructure at Attari station, etc.



Porters working at Wagah border may face a tough life once the trucks start crossing the border

The opportunities for trade via Wagah (Attari Road) as well as through Attari Station (3 km from the Indo-Pak border) have vastly increased, largely owing to the changing economic environment and greater degree of market orientation in India and Pakistan. The Pakistan government has allowed duty free import of six items-onions, potatoes, tomatoes, garlic, and meat and livestock (including buffaloes, cows, goats, sheep and camels)-from India through the Wagah land route. Also, India imports dry fruit through Wagah border.

Through Attari Road via Wagah, in 2005-06, goods worth Rs. 65.04 crore were exported to Pakistan, while in 2006-07, the figure touched Rs. 166.72 crore. The exports to Pakistan in the first two months of the current financial year has reached Rs. 16.60 crore. During last financial year around 55,000 people (including outgoing & incoming, excluding pilgrimage Jathas) crossed the border through Attari via road, which clearly indicates that it is bustling with the activities.

There is a proposal for construction of toilets for tourists who come to witness the beating retreat at Wagah. Further, to improve the infrastructure at Attari station, there are proposals from the ministry to increase the number of custom clearance counters and construction of motorable track along the railway line for surveillance.

The Pakistan government has already upgraded the infrastructure and made the road to Wagah six lane and constructed a cargo terminal. Although the government has proposed a four-lane road from Verka to Wagah, it is yet to take off.

At present trucks are not allowed to enter each other's territory. About 700 porters at the Wagah border receive and transfer goods without entering each other's territory.

"At present the trade with Pakistan through Wagah border is more than Rs.650 crore annually. But it can rise manifold if infrastructure is improved and if Pakistan allows some more item to trade through Wagah. Recently, Anne Krueger, an IMF official, said if the border was opened fully for trade, the trade could touch 9 billion dollar annually," Gunbir Singh, Chairman, CII Amritsar Zone, said. ❑

50 Villages Identified in J&K for Rural Tourism; 7 in First Phase

Fifty villages in the state have been ear-marked for development of "rural tourism" under centrally sponsored project funded by Ministry of Tourism, Government of India (GOI).

Rural tourism is a new catchphrase that is adding a feather to the cap of state's tourism industry, as it is show-casing the uniqueness and aesthetics of villages to tourists in the state.

"We have identified 50 villages in the state, 26 from Kashmir division, 20 from Jammu and four from Ladakh, for utilising their vast potential to convert them into tourist villages," said director tourism Kashmir, Farooq Ahmad Shah. "The project is being funded by Centre".

The project, which is in progress from last two years in the state, would be completed in five years with 10 villages every year. "These villages would be developed in a phased manner and Rs 70 lakh would be spent on every village, Rs 50 lakh for hardware development (including modern toilets, lanes and drains) and Rs. 20 lakh for software development (including a small tourist reception centre, a library, and local handicrafts)," he said.

In the first phase, five villages have been identified in the valley and two in Jammu for rural tourism. The villages in the Valley include Drang (Gulmarg), Gagangir (Sonamrag), Pahalgam village and Akingam (Anantnag). In Jammu the villages include Surinsar and Jhiri.

Kashmir, known globally as "paradise on earth" is pregnant with tremendous tourism potential has always remained the attraction for every nature lover and traveller. However, tourists would often visit Kashmir and go back with memories of just a handful of tourist destinations, they visit here. Now, rural tourism will unfold the Kashmir's beauty by introducing tourists to multifaceted culture and traditions of rural Kashmir.

Rural tourism will provide a chance to tourist and visitors to discover the hidden Kashmir.

This is also the need of the hour, as tourist now do not visit places to lodge in five star hotels or just roam in the known places. They want to discover nature in its purest form and the tourist villages would be the best option for them.

Rural tourism provides a scope for eco-tourism-environmentally friendly tourism. In eco-tourism, environment is the first priority. No concrete structure other than traditional houses made of log wood and thatched roofs would be constructed," he added. "But modern sanitation facilities (western bath-rooms) would be made available to the tourists.

As the rural tourism project is in offing in the state, experts are pinning hopes on the likely benefits the project is going to offer to the local populace. "Rural populace would be benefited in many respects by rural tourism, especially artisans who sell their product through middlemen," said Muneeb Ahmad Malik, a tourism official. "Villagers will be able to rear a "tourism culture" in Kashmir," he added.

Its expected that rural tourism will seep into grass roots level, as villagers will become stake holders in the tourism industry. Artisans will present their artifacts before customers without getting exploited.

This project, will also help in bringing awareness among the people about tourism. Illiterate people do not know the significance of tourism in Kashmir. This will help in making them aware about tourism and how to get benefit from this profitable industry. ❑

Nightlife returns to Valley



The shops that would shut around sunset now remain open till 9 pm. And the roads bustle with traffic far beyond this hour. Public parks are full of strollers till late in the evening.

In other words, nightlife is gradually picking up in Srinagar.

The open-air theatre at Zabarwan Park, on the southern bank of the Dal Lake, is a favourite rendezvous point, late in the evening. Kashmiri folk and sufiyani artists often perform at this beautiful landscaped park set up by the state tourism department. "Shows continue till 10:30 pm here," said a tourism department official.

The centuries-old tradition of night-time weddings is gradually being revived again. The practice had stopped in the early '90s due to the separatist movement. "The city's security situation has improved" said a policeman. But in the rural areas, nights continue to remain tense. "A curfew-like situation prevails at night here," said Ghulam Hassan Bhat, Village headman of Shopian. "Security personnel from nearby camps have asked us to remain indoors at night," he said.



A girl collecting apricots in an orchard in Kargil. Kargil apricots are famous for their nutritional value and are exported worldwide.

Make hay while the sun shines...



Women on their way home carrying firewood, near Zojila pass on Srinagar-Leh national highway, Kashmir

DO YOU KNOW ?

What is NASSCOM ?

What is NASSCOM ?

NASSCOM is India's National Association of Software and Service Companies, the premier trade body and the chamber of commerce of the IT software and services industry in India. NASSCOM is a global trade body with over 1100 members, of which over 250 are global companies from the US, UK, EU, Japan and China. NASSCOM's member companies are in the business of software development, software services, software products, IT-enabled/ BPO services and e-commerce.

Why was it set up ?

NASSCOM was set up to facilitate business and trade in software and services and to encourage advancement of research in software technology. It is a not-for-profit organization, registered under the Societies Act, 1860.

NASSCOM has been the strongest proponent of global free trade in India. It is committed to work proactively to encourage its members to adopt world class management practices, build and uphold highest quality standards and become globally competitive.

In India and around the world, NASSCOM members are participants in the new global economy and are reputed for their cutting-edge business practices and social initiatives.

When was NASSCOM born?

In the 80s, Nasscom was born, primarily due to the efforts of Harish Mehta. It was supposed to have a software centric approach and its mandate was to lobby and obtain concessions from the government on tax matters.

Mehta was also instrumental in handpicking Dewang Mehta as Nasscom's executive director and over the next decade Dewang and Nasscom became synonymous across the world. Throughout the '90s, Nasscom played the pivotal role as the lobbying body to nurture the industry's growth. Dewang led from the front till his tragic demise in 2001 and it was because of his untiring efforts that Nasscom became a true representative of the Indian IT industry.

Notwithstanding initial apprehensions, Kiran Karnik has proved to be a worthy successor to Dewang. While in the initial days Dewang had to lobby for issues like tax sops relevant for a growing industry. Karnik had to face the challenges normally posed to a leader. Be it the anti-outsourcing brigade in the US, the BPO data theft scandals, several manpower issues, Karnik has come out with flying colors. Today, Nasscom has around 1000 members and they contribute over 95% of India's software revenues. It had set up the Innovation Forum, BPO Forum, the ESO Forum and the likes among others to promote the industry.

What are its aims and objectives?

The primary objective of NASSCOM is to act as a catalyst for the growth of the software driven IT industry in India. Other goals include facilitation of trade and business in software and services, encouragement and advancement of research, propagation of education and employment, enabling the growth of the Indian economy and provide compelling business benefits to global economies by global sourcing.

NASSCOM also endeavors to leverage IT and narrow digital divide in India and enable her citizens to enjoy the benefits of IT. It also boosts the process of Innovation; IT workforce development and enhance cyber security.

What is NASSCOM Foundation?

NASSCOM Foundation is a trust registered under the Indian Trust Act 1883. It represents the software industry's commitment to leveraging IT for empowering and serving the under privileged. NASSCOM Foundation has the unique opportunity of leading the ICT for development sector from a national perspective. The Foundation also facilitates and strengthens the corporate social responsibility (CSR) space to a wider understanding of contribution to development and towards achieving the Millennium Development Goals (MDG's).

What is its Vision?

NASSCOM's vision is to establish India as the 21st century's software powerhouse and position the country as the global sourcing hub for software and services.

Who is its next President ?

Mr Som Mittal will succeed Mr Kiran Karnik as the next President, NASSCOM in January, 2008. Mr Mittal is presently, Head of Services and Business, Hewlett Packard for Asia Pacific and Japan.

– Madhawan

(He is pursuing Engineering in IT)

'1857' in Indian Cinema



Sharmistha Gooptu

1857 HAS had multiple registers in academic and public discourse, but what remains little explored, and even less understood, is the complexity of its visualization in Indian cinema. Filmic rendition of 1857 acquired unprecedented highlight following the release of Ketan Mehta's Mangal Pandey: the Rising in 2005. The film produced a national debate on the question of the relation between film and history. The film was accused of fabricating and falsifying history, by intellectuals, politicians and local groups like the Mangal Pandey Suraksha Samiti, which had sprung up to defend the nationalist legacy of Mangal Pandey. There were others, including myself, who defended the filmmaker's liberty to access nationalist myths to sell his product, and in a short commentary published in Economic and Political Weekly (Gooptu, EPW, 27 August 2005) I made the point that perhaps the current debate on the historicity of Mangal Pandey was motivated by the emergence of Bollywood cinema as an important newsmaker.

While the debate raised some very important questions on the relation between recorded history and its rendition in cinema, what was less deliberated at that point was Mangal Pandey's relation to the mainstream debates on 1857. For, while the film clearly built on the nationalist construction of the historical figure of Mangal Pandey, it also claimed a degree of 'authenticity' based on historical reconstruction. Why at all would commercial Hindi cinema attempt to do such? What credentials, was it imagined, would an 'authentic' portrayal of the life and times of Mangal Pandey attribute to the film? To arrive at an answer to these questions, this article looks at four films of the historical genre made at various points since the 1950s, and how each of these films could be related to public discourses on 1857. For, it is striking that the 1857 discussed in this article, reveal, with the exception of one film (Jhansi ki Rani, 1953), a certain rooted concern for 'history'. What is seeked to establish in the process is not only the complex nature of the filmic renditions of 1857, but also the conscious choices involved therein, and try to understand why at all such choices would be made by filmmakers.

Jhansi ki Rani: the last great 1857 'historical': In her discussion of Indian historicals of the late colonial period Priya Jaikumar writes: Indian films in the historical genre depicted imaginary pasts... Indian historicals were structured as romances to tell stories of a colony's victimization and unrealized power by staking physical and moral claims on the homeland... .Exaggeratedly dramatic speech influenced by Parsi and Shakespearean theatre, multiple plots, heightened use of character for symbolism, reduced character development, and an episodic structure the historical film's realism. (Jaikumar, 205-11)

Sohrab Modi's Jhansi ki Rani (1953), with Mehtab and Sohrab

The author is with University of Chicago.

Modi in lead roles, the first of the 1857 films, was in this genre, "a spectacular account of Rani Laxmibai's (Mehtab) life, the 19th Century queen of Jhansi known as Manu to her friends and who led her armies into battle against the British East India Company during the 1857 rising" (Encyclopaedia of India Cinema, 332). It is a nationalist rendition, in the vein of the historicals of the late colonial period that Jaikumar studies. Though the film did not depict an imaginary past, it was a romantic visualization of 1857; a powerful evocation of the recently rested anti-colonial struggle through the kind of symbolism and moralist perspective that was particularly relevant to a newly independent India. It used imaginary events and characters to develop this scheme and its dramatic impact, had elaborate battle scenes, and overall was another of the great and rousing historicals. But, it was also the last 1857 historical in this genre.

The next film on 1857, made after a break of twenty-three years, in 1977, was a very different kind of film, with an altogether different scheme. By then the great historical had its day. Also, in the meantime, 1857 had re-emerged in its hundredth year, marked by national celebrations to me recolled morialize the event in 1957.

The centenary celebrations occasioned considerable public debate on the uprising of 1857, mostly related to the question of whether it was a Sepoy Mutiny or a War of Independence, and marked the nationalist re-construction of the event. For instance, on 11 May 1957, the Times of India (Bombay) carried the following editorial piece:

It was 10 May, a hundred years ago, that Indian sepoys mutinied in Meerut. The trouble spread to other cities, and what started as a protest by Indian soldiers soon turned into a concerted challenge to British power. The full story of the stirring events of 1857 has yet to be told. There are still many points on which historians do not see eye to eye with one another... But whatever these differences, there is no denying that memory of that



revolt left a deep impress on national memory, and that it was the memory of that great resistance which inspired the freedom movement to which Congress gave final shape. In the centenary year of that first challenge to British power the nation, now free, remembers with gratitude the men and women who led and took part in that revolt.

On 9 May, Times of India (Delhi) had carried a report of the U.P. Government's granting of amnesty to 2000 prisoners in celebration of the centenary, and the declaration of 10 May as a public holiday in the state. According to the report, celebrations had started in Lucknow the previous day, when people paid homage at the spot where leaders of the uprising had been hanged. The next day's (10 May) front page carried a report of mass rallies planned in Delhi, led by the Prime Minister Jawaharlal Nehru and the communist leader S. A. Dange. There are reports of special celebrations at those places that were sites of the uprising, Lucknow, Meerut, Jhansi, Mathura, Agra, Bithur, Kanpur, Allahabad. At Gwalior, various political parties paid homage at Rani Laxmibai' s 'samadhi' (Times of India, 11 May 1957).

While on the one hand the centennial entrenched 1857 in its nationalist myths, it obviously also generated a greater currency for 1857 as 'history'. The centenary celebrations were themselves flagged off with a ceremony at Rashtrapati Bhavan at which the official history by Dr. S N Sen, which had been commissioned in 1955 by the Union Education Ministry, was presented to the President, Dr. Rajendra Prasad. As pointed out by Shahid Amin, there followed "a whole crop of histories of the Ghadar in different districts and regions written in the medium-sized university towns in North India", where 1857 had greatest political currency (Amin, The Telegraph, 13 July 2006). Stretching this, it may be posited that 1857 became in the collective psyche an event not only of

nationalist significance but also one that claimed 'historicity' in its renditions.

Why there were no more great 1857 historicals in the genre of Jhansi ki Rani is not easy to account. Perhaps the subject was too grim; perhaps it needed elaborate outdoor shoots for the scenes of war that could be kept at a minimum or even dispensed with in say, the Mughal period romances; or, perhaps, it just came to be considered a subject that was the stuff of more 'serious' deliberation. Regarding the last point, a parallel could be made with Partition films. It has often been commented that the first Hindi film related to the subject of Partition was M. S. Sathyu's directorial debut Garam Hawa (1973), made more than twenty years after 1947, and it has been noted that perhaps Partition remained, for a long time, too traumatic and contested an episode to be easily addressed. While 1857 was not part of living memory in the way that the Partition was for many people in the Bombay film industry, the point here is that with the attachment of political capital, perhaps, 1857 became, like 1947, a somewhat delicate issue, and, maybe, perceived as best left to those who purported a 'seriousness' in its rendition (though, of course, that might not be a nationalist perspective, as later films proved).

In the 1970s we get the next two 1857 films, in a new genre, both, in their own ways, claiming authenticity in the depiction of history.

Shatranj ke Khilari: the new genre of the 1857 'historical': In 1977, Satyajit Ray, started shooting a historical film based in Awadh of 1856, in the reign of Nawab Wajid Ali Shah. It falls into our discussion of 1857 films because of its plot centering the British takeover of Awadh, which has been cited as one of the causes that triggered the 1857 uprising in the region. The film has two parallel narratives, one based on Munshi Prem Chand's short story of two chess-playing jagirdars, who remain absorbed in their games of chess while the British moved into Lucknow, the other dramatizing the take-over of Oudh by the British under General Outram.

The film has a strain of nationalist sentiment in its concession of the treacherous act of Dalhousie's take-over of Awadh, the frustrations of the Nawab, and Outram's own discomfort with the course of events. Yet, it is a new genre of the 1857 historical with its overt subtext of historicity, and its departure from the established elements of the historical genre that were available in Jhansi ki Rani- the film builds on research and recorded history and dispenses with the larger-than-life element established by the genre. Rather than intense engagement as called for by the heightened use of character and action in the conventional historical, the voice-over punctuating the diegesis gives the sense of a fait accompli, establishing distance from the unfolding historical events.

Ray was India's most famous filmmaker and his films automatically generated a series of assumptions about the quality and value of the product. Shatranj ke Khilari was meticulously researched and period reconstruction undertaken in the minutest of detail. Filmfare, which had been following the shoots since its 7-20 January 1977 issue, for instance, revealed in its 18 February-3 March issue that actor Amjad Khan, who plays Wajid Ali Shah in the film, was being trained in Kathak dance, for scenes in the film that had Wajid Ali performing the Raas-leela with his nautch girls. Cooper mentions that Ray's research on Wajid Ali Shah had revealed, according to Ray, Wajid's "extraordinary character", which "made the King a figure worthy of film treatment." (Cooper, 198).

In response to a critic's comments in the 22 October 1978 issue of *The Illustrated Weekly* of India that Ray had been "Orientalist" in his depiction of Wajid Ali as weak, ineffectual and effeminate Ray himself declared many of the sources he had consulted while making the film in the 31 December 1978 issue of the magazine. These included among other contemporary sources, Abdul Halim Sharar's Guzesta Luknow, which provided both the socio-cultural details and a portrait of Wajid in Lucknow and Calcutta, the text of Wajid Ali Shah's Rajas, where he plays Krishna, and the young Wajid's personal diary, *Mahaj Khana Shahi* (Cooper, 199). It is instructive that a crucial issue, for filmmaker and viewers alike was authenticity in the rendition of history, which did not appear to be such a significant issue for *Rani of Jhansi*. Of course, this was a Ray film which carried expectations very different from what one would have of a mainstream commercial genre, yet the mutation of the 1857 historical is significant in itself, and the 1957 centennial could be

posited as a backdrop. The subtext of historicity remained significant in Junoon, the next 1857 film.

Junoon: the first "authentic" depiction of 1857: *Junoon* (1978) was released in the very year after *Shatranj ke Khilari*. The screenplay was based on "A Flight of Pigeons", a long short story by Ruskin Bond. Directed by Shyam Benegal, who pioneered the New Cinema movement, the film, situated in and around Lucknow, is the story of an Anglo-Indian family trapped in the violence of the uprising, and of a group of people thrown together by the course of events. As noted in the *Encyclopaedia of Indian Cinema*, the film weaves "a passionate love story into the historical fresco" and "opts for a colonial sexual fantasy" *(Encyclopaedia of Indian Cinema*, 436). However, the film also appropriated for itself a claim to the 'authentic' depiction of historical events.

Junoon was actor Shashi Kapoor's debut as producer and was released under the new banner Filmvalas. In an article on the making of the film, *Filmfare* noted, "In the early years of his career Shashi Kapoor had said he would do whatever he could to sponsor good cinema. "Junoon" is an attempt to redeem that pledge" (*Filmfare*, 1-15 June, 1978). According to the *Filmfare* article, shooting of the film had been done "on actual locations or, for cinematic logistic reasons, at the nearest corresponding spots." The film was claimed to be the first authentic depiction of the Mutiny (perhaps on account that *Shatranj ke Khilari*, strictly speaking, was not a '*Mutiny*' film), its claims for authenticity resting on registers such as, the credentials of its director which placed it in the category of art cinema, its research and naturalistic period reconstruction or, like *Shatranj*, its departure from the principal paradigm of the mainstream historical genre, as discussed.

Mangal Pandey: the Rising: Returning to *Mangal Pandey*, the most recent 1857 film, we get a complex text, to a great extent drawing upon the genre historical and the structures of the mainstream Hindi film, yet not entirely devoid of the subtext of historicity.

Mangal Pandey was a big budget, mainstream film, with big stars, and re-constructed the nationalist legend of Mangal Pandey, the sepoy who's 'mutiny' is claimed to have initiated the uprising of 1857. As noted by one reviewer, "The stuff of Bollywood is all in place -- colour, music, the obligatory Holi number, men refusing to die from bloody wounds" (Pereira, rediff.com, 12, August 1995). The character of Mangal Pandey in the film is played by Amir Khan, who's film *Lagaan* (2001, Dir. Ashutosh Gowarikar) made history for Indian cinema when it got nominated to the Oscars in the Foreign Film category in 2001, setting a trend of sending in mainstream Hindi films for international awards and film festivals. Khan was producer and lead actor of *Lagaan*, a period drama set in 1893, which told the story of the oppression of the British Raj and spirited resistance by a group of men in the drought-hit village of Champaner. *Mangal Pandey* was Khan's next film after a break of more than three years, directed by Ketan Mehta, who has been a critically acclaimed director of the New Cinema movement of the 1970s and '80s, and later moved into more mainstream cinema. *Mangal Pandey* was in many ways an extension of *Lagaan*, with its popular anti-colonial schema, its identification as an Amir Khan film, which generated enormous hype before the release, or its use of an international cast and its eye for the international market. The film flopped at the box- office, and a large part of the flak it received from viewers and critics was related to its 'distortion' of history. As one critic spurted, Bollywood continues to defile history. Now distorting, now disparaging, Bollywood's arthritic treatment of the past goes on. Ketan Mehta's much panned "Mangal Pandey" is only the latest, and probably the weakest, link in the chain which goes back many years..." (Salam, The Hindu, 26 August 2005).

Put in perspective, for a commercial mainstream film which had a certain economic logic in appropriating a popular nationalist legend, such assessment apparently indicates a confusion of categories. Yet, perhaps it was not so, given that the text of Mangal Pandey is complex and composite; the film is not entirely historical, yet it is not wholly fictitious, though it definitely displays liberties with known historical episodes to flesh out the narrative, given that very little is actually known about the historical figure Mangal Pandey. For instance, a significant part of the film centers round Pandey's evolving relationship with the prostitute Heera. A scene, where Pandey expresses disgust at the prostitutes who "sell their bodies to Englishmen", Heera retorts, "But we only sell our bodies, you sell your souls", is unmistakable in its reference to what happened in Meerut where "courtesans of the bazaar brothels" taunted the sepoys, "egging on the men to rescue their 85 comrades from the gaol" (Taylor, 45). Needless to say, this is a case of cinematic license, for these events took place in Meerut, not in Barrackpore, according to established histories. Yet, also, it is not wholly fictitious, and indicates

an effort to weave known historical facts into a composite text.

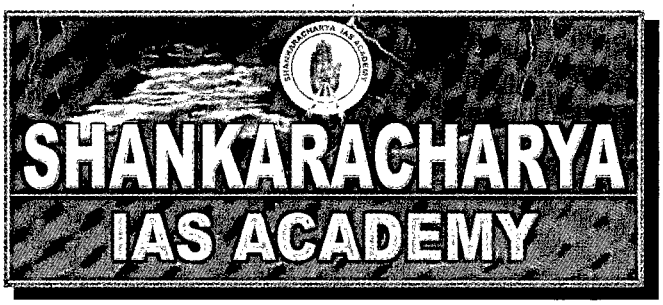
Mangal Pandey, as constructed by the film, is a layered and nuanced character. He is a loyal sepoy in the company's pay, who even fires on hapless villagers on the command of his senior officers. He is a caste-conscious brahmin, and it is his realisation that he may have been defiled and rendered outcaste by biting the cartridge issued to him that marks a decisive turn in his life. Unlike Bhuvan, the protagonist of Lagaan, he is not an unproblematic positive character, who can embrace an untouchable at a moment's notice or stands opposed to the colonial state from the start. While he undergoes some sort of nationalist transformation during the second half of the film, and of course the logic of a popular film demands that this happen, this transition is shown developing in stages and at several levels, leaving him turn between loyalties and friendships. Even the lead British character, Captain Gordon, played by British actor Toby Stephens has several shades, unlike the uncompromisingly villainous Captain Russel of *Lagaan*. The point here is that the film, while definitely not based. on the kind of research that went into *Shatranj ke Khilari*, and neither purporting the kind of historicity that Ray did, was also not completely comparable to say, *Mughal-e-Azam* or even *Jhansi ki Rani*, with their uni-dimensional and rounded symbolism. Rani of Jhansi, for instance, glosses over the entire course of events relating to the Rani's own lack of choice in the matter of eventually joining the rebels, to present her as a symbol of anti-colonial resistance (David, 350-374). Mangal Pandey, by contrast, presents a more complex imagery. The film is also curiously reflexive of the nationalist re-reconstruction of 1857. The title sequence is picturized on a group of men on an elephant, singing the theme song with the refrain 'mangala mangala" as the day gets started, marking auspicious celebration and addressing themselves to towns, villages and homes to rise. Contrast this to the following description in the Times of India of 'prabhat pheries' (morning rounds) to mark the centennial celebrations in 1957- "All over the country, in towns, villages, 'prabhat pheries' were taken out to singing of national songs and tricolour hoisted in mark of centenary. In many places, flag of revolutionaries-green with a golden sun was unfurled also" (Times of India, 11 May 1957). Mangal Pandey is also not a self-Contained narrative, as Jhansi ki Rani, but ends with a pointed reference to the nationalist trajectory, linking it to the Pandey's narrative, harnessing an established discourse of Mangal Pandey as nationalist hero. The film ends with the voiceover: "Mangal Pandey became a symbol of nationalist resistance. As the first martyr to the nationalist cause, he inspired future generations to fight for freedom." The voiceover dissolves into footage showing Gandhi and evocative scenes of civil disobedience and mass rallies. Pandey's dream, we are informed, was realized ninety years later, on 15 August 1947, when India finally became independent.

Thus, for Ketan Mehta's Mangal Pandey also, it is possible to identify a subtext of purported historicity, which was perhaps so forcefully contested because it treaded so fine a path between 'history' and its' distortion, making a sifting complicated for both; historians, with their sense of historical accuracy, and mass of ordinary filmgoer, whose only exposure to Pandey was perhaps in their school textbooks which fit him into the nationalist trajectory.

For the film itself, this subtext was clearly motivated by a bid for a greater mobility for mainstream cinema, as first happened with Lagaan's nomination to the Oscars; such investment was quite poignant when, after the film's poor showing at the Locarno Film Festival, the director claimed that his film had been given a standing ovation there. Perhaps the film had been conceived through a subconscious referencing of the films the '70s, which had rendered 1857 a suitable subject for 'serious' cinema.

As stated at the outset, this article bas tried to explore how 1857 films have directly or more sub-consciously drawn from mainstream discourses on tile Mutiny/uprising, to present their renditions of 'history'. Professional historians have typically been dismissive of such renditions which have hence remained relatively obscure from academic analysis. This article has tried to show how public and political discourses might have influenced the mutation of the 1857 films, and how such linkage was fuelled by equally political imperatives of the filmmakers concerned. To return to Shahid Amin's article where he indicated that "commemoration is too serious (or political) a business to be left to historians: poets, publicists, politicians, playwrights all must contribute:" I would add filmmakers to that list. ❑

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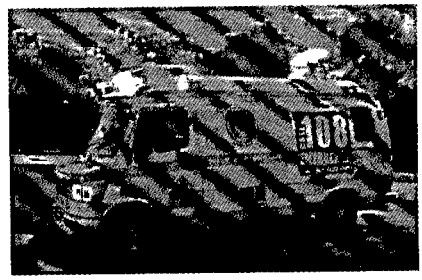
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YE - 11/07/16

Touching Lives



V Balakrishna

WHEN A powerful bomb exploded in the historic Mecca Masjid in Hyderabad, one emergency response service came to rescue the injured within five minutes from the time of call.

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EMRI has recently launched '108 Emergency Response Service' in Gujarat on 29th August, 2007 in Public Private Partnership with Government of Gujarat. Initially 25 ambulances are deployed to cover Ahmedabad and Gandhinagar city. By March 08 there would be around 400 ambulances covering the entire state, and the state of Gujarat will have 108 as the single toll free number for all their emergencies.

Tamil Nadu, Madhya Pradesh, Jammu & Kashmir, Kerala, Maharashtra and Puducherry governments have shown interest to start the service. "Our vision is to extend the service of 108 nationally and save on million lives a year by 2009. Launch in Gujarat is the first step towards it" says Mr. Ventak Changavalli, CEO, EMRI.

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(Email : www.emri.org)

The author is Asst Editor, Yojana (Telugu), Hyderabad.

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YE - 11/07/15

Leave No Child Behind

It has been suggested that the first question the Indian Prime Minister should ask his ministers is not "how is the economy growing?" but rather "how are children growing?". The ministers, however, would probably rather answer the former, for the state of Indian children is nothing short of a humanitarian emergency.

Few countries, in fact, have worse indicators of child development. Progress in this field has also been very slow, with countries like Bangladesh "overtaking" India during the last few years. This crisis casts a deep shadow on India's progress in other fields.

The average Indian child gets a rather poor start in life. Even before birth, he or she is heading for disaster due to poor ante-natal care and maternal undernutrition. About one third of expectant mothers in India are deprived of tetanus vaccination, an important defence against infection at birth.

Similarly, about one fourth of pregnant women do not have a single ante-natal check-up, and a majority of deliveries take place without the assistance of any health professional. Worse, the average Indian mother is frail and anaemic. This is likely to result in low birth-weight, a major cause of child under nutrition.

After birth, life continues to be precarious. About one third of all newborn babies in India weigh less than the acceptable minimum of 2.5 kilograms. Under nutrition levels keep increasing during the first two years of life, largely due to poor breastfeeding and faulty weaning.

About half of all children below three years of age are undernourished, more than half are deprived of full immunization, and a large majority suffer from anaemia. Illness is also widespread, with a fifth of all children suffering from diarrhoea and almost a third suffering from fever. A substantial proportion of Indian children (about one tenth) never reach the age of five.

As children grow up, poor nutrition and ill health affects their learning abilities and preparedness for schooling. In 1998-99, almost one third of all children in the 15-19 age group had failed to complete Class 5, and one half had not completed Class 8. So much for the "fundamental right to education". By the time Indian children are supposed to complete upper-primary school, many of them have actually been pushed into the labour force and are further ruining their health by working long hours in harsh conditions.

In short, millions of Indian children are condemned to stumble right from the start. During the first six years of life, and especially the first two, they sink in a dreadful trap of undernutrition, ill health and poor learning abilities. This burden is very difficult to overcome in later years. Another disturbing aspect of the situation of children in Indian is that the rate of improvement over time is very slow. Extreme forms of hunger and undernutrition, such as marasmus and kwashiorkor, have sharply declined over the years. But the general progress of nutrition indicators (such as the heights and weights of Indian Children) is sluggish.

The findings of the third National Family Health Survey ("NFHS-3"), released just a few days before the completion of this abridged report, are quite alarming in this regard. For instance, the proportion of undernourished children, based on standard weight-for-age criteria, was virtually the same in 2005-06 as in 1998-99: in both years, nearly half of all Indian children were underweight.

Even the decline of stunting in that period, from 45 per cent to 38 per cent, is far from impressive-about one percentage point per year. If the incidence of stunting continues to decline at this rate, it will take another twenty-five years or so to reach levels similar to those of China today.

Health-related indicators from the third National Family Health Survey are no less disturbing. For instance, they suggest that child immunization rates were much the same in 2005-06 as in 1998-99. The incidence of anaemia among children was also similar in both years; in fact, it was a little higher in 2005-06, according to the available NFHS-3 data.

While some other indicators have improved, the general pace of change is excruciatingly slow-much slower, for instance, than in neighbouring Bangladesh. Similar concerns arise if we look at mortality indicators. In India as in most other countries, the infant mortality rate has steadily declined during the last fifty years or so: from about 150 per 1,000 live births in the late 1950s to 60 per 1,000 or so today.

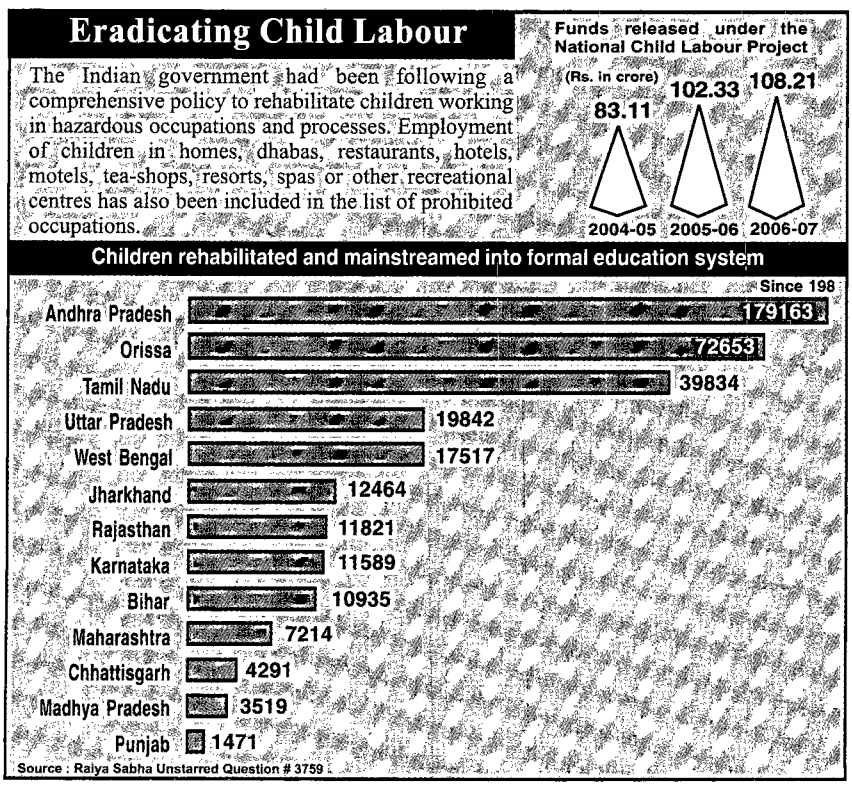
However, the decline of infant mortality slowed down significantly in the nineties, compared with earlier decades. The rate of decline seems to have picked up again during the last few years, but nevertheless, the overall progress made since 1990 is quite limited in comparison with many other countries.

This slow progress in the field of child health and nutrition is all the more striking as the Indian economy is one of the fastest-growing in the world. Yet the progress of child development indicators has been much slower in India than in many countries with comparable or even much lower rates of economic growth, including many neighbouring countries.

The state of Indian children ultimately reflects a deep lack of political commitment to children's rights. The value of a rights approach to social development has been well demonstrated in recent years.

Against this background, there is an urgent need to reexamine what India is doing for the survival, well-being and rights of children under the age of six years. Broadly speaking, two types of intervention are needed. There is, first, a need to address the structural roots of child deprivation, including mass poverty, social discrimination, lack of education, and gender inequality. Second, there is a need for immediate protection of children under six, by integrating them in an effective system of child development services that leaves no child behind. ❑

(The above is excerpted from the Report 'Focus on Children Under Six' by the Citizens' Initiative for the Rights of Children Under Six.)



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YE - 11/07/07

Potential Untapped

Sunita Reddy

There has to be a conscious effort to use sports as a means of creating equity and brotherhood

In India, sports is seen as a way of realizing the body potential to its fullest; also known as "Dehvada" in ancient India. The philosophical foundation of the sports and games in India lies in the history of India dating back to Vedic era in which the Atharva Veda said, "Duty is in my right hand and the fruits of victory in my left". These words in the traditional mantra hold the same spirit as that of Olympics oath that implies: "....for the honor of my country and the glory of sports." The history of India also beckons of an interesting link between Greece (the motherland sports in the world) and India which dates back to 975 B.C. when both the nations pioneered in the sports (games) like chariot racing and wrestling.

The golden history of sports in India is also evident in the immortal Indian epics like Ramayana, Mahabharata etc. Whereas during the period of Ramayana; hunting, archery, horse riding, swimming were the royal games; Mahabharata made a mark in the sports like dicing, gymnastics, wrestling, chess (Shatranj) and gulli danda. Puranas mention about the threatening game of rope fighting. The archeological excavations of Harappa and Mohanjodaro along with the religious manuscripts like Puranas and Vedas are the standing testimonials of this glorious history of Indian sports.

The historians believe that many sports (games) like hockey, archery, wrestling and chess originated in India, which are synonymous to strength and speed nowadays. In the late Vedic Era, besides sports; the Yoga and Meditation, the inevitable parts of the toughest "Yogashashtra" made India, acquire the seat of spiritualism, all over the world. This dignified discipline of Indian Sports finds its place in Bhagwad Gita too.

Popular Sports

Field Hockey is India's national game. India was once the best

The author is Asst. Prof. JNU, New Delhi.

international team in the world. The team had won many medals and had many great players. India has won eight Olympic Golds and the World Cup in 1975 and runners-up in 1973. A great player such as Major Dhyanchand has been referred to as 'wizard' and Germany's popular chancellor Hitler once offerred him a marshall rank in his army.

Football is very popular in India. Many Indians keenly follow as well as South American and European clubs. The sport is most popular in Goa, Kerala, Manipur and West Bengal. The National Football League (NFL) is the premier football league in India. East Bengal and Mohun Bagan are the most popular football clubs in India. In September 2006, India and Brazil signed an agreement to formalize a scheme to train Indian footballers .

Tennis is popular among Indians in urban areas. However India's fortunes in the Grand Slams singles have been unimpressive. Owing mainly to the performance of Leander Paes and Mahesh Bhupathi. Paes bagged a bronze Olympic medal in 1996. Sania Mirza is India's highest ranked women player. She was the first Indian woman to quality to the third round of Wimbledon. She has also won a WTA tournament.

Kabbadi originated from Punjab and Haryana, India bagged gold at the Asian Games 2006 men's event and won a gold in kabaddi world cup held in India.

Netaji Subhas National Institute of Sports in Patiala is Asia's largest Sports Institute. This Institute is popularly known as the "Mecca" of Indian Sports and has produced Coaches of high caliber and significantly contributed in rendering their expertise and assistance in the preparation of the national teams for various International competitions.

Potential to be Tapped

Though India has a billion population to boast but in sports it hardly stands in the world picture except for cricket and tennis. Cricket needs no mention, is altogether a different game, with over emphasis and overdue attention in the game and even by the audiences, a fever which never leaves.

Japan, China, USA and even small countries like Korea, New Zealand are grabbing gold, silver and bronze in Olympics. India has seen very few figures in sports, less than 100 legends. Sports in India is more a leisure activity, parents are apprehensive about a career in sports because of its uncertainty and also very less glamour and remuneration, exceptions like cricket and tennis. We generally tend to secure the future of children with a steady job with steady income. Sports is limited to school activity hardly going beyond and slowly takes a back seat in colleges and universities. The infrastructure lies unused and underused. Sports becomes a complete no after getting into a job and getting married. Unlike in other countries, we hardly find people getting into sports in the middle ages.

Sports for girls is hardly encouraged, the image of a girl to be soft and feminine is imposed by the society and sports as a career is hardly thought of. Very few women who have excelled in sports are from South India, especially Kerala, where women's position is comparatively better.

There is lot of scope of research on some of the mentioned areas of issues, especially what motivates people to get in to sports, the facilities available in public/ private schools and government schools. The facilities in private schools may be good but the charges for learning may be a deterrent for many to get in. The class and caste and gender dimension of sports participation.

There is an immense potential, yet untapped, in India for the youth to participate in sports. The geographical variability itself can be taken as an advantage. Starting from youth in the North Eastern Hills, who are capable to walk miles up and down the hill, can be tapped for marathons, extreme south are the youth in Kerala and Tamil Nadu's coastal areas, skilled in surfing the sea needs little training for yachting, to west youth in Rajasthan having immense stamina, built in the deserts of Thar to affluent states of Punjab and Haryana, where the physique, the tall, well built personality matching no where in India. Counting on tips, Kapil Dev from Haryana, Navjot Sidhu, Ajay Jadeja from Punjab and Sehwag from Delhi, all in cricket, youth has found no place in sports. It is interesting to see how Lt. Colonel Rajyavardhan Rathore who saw the shooting range only four years before he won the Olympic silver medal, shows that if one perseveres and is focussed, one can achieve.

It is well known that India is home to a significant proportion of the youth of the world today. Developed nations are eyeing India as the source of technical manpower. In this era of liberalization and globalization on one hand the opportunities are pouring in different ways, opening up markets

and scope to take up myriad jobs, however, contractual, unstable and momentary they may be appeasing with huge pay cheques with lot of strings attached to it. Converting potential professionals into telephone operators, working as executives, with not even guarantee job security for the next moment leave about tomorrow, largely confined to urban cosmopolitan.

Youth in urban areas have abundant opportunities but youth in rural areas are hard hit by unemployment, underemployment, lack of guidance, lack of resources and lack of encouragement and the most important of all the lack of opportunities, buttressed by power politics, casteism, nepotism, and corruption. The rural youth, conventionally thought to be involved in agricultural activities on observing minutely has plethora of needs and aspirations not understood, not addressed and not unmet. Shoving them into situations of delinquency, crime, eve teasing, rape, alcoholism, drug abuse, smoking, gambling etc.

The dietary patterns in Punjab and Harayna are very rich with all the dairy products, wheat and vegetables. The large majority of youth in the rural areas, spend the leisure time, gossiping, playing cards, chatting and sometimes involved in petty quarrels and politics. Huge mechanization of agriculture, lack of job opportunities and lack of alternative employment, like industries have led them to loiter around idly.

Sports sometimes also helps in qualifying in some of the services like, police services or armed forces. The youth of Haryana in a group discussion, in a village, reported of lack of proper playgrounds and sports facilities. They demanded for a playground and stadium, but their demands are not fulfilled by panchayats. The family in turn taunt by saying 'Khel ke Sachin Banega ke' with a view that all of them should become players. It is not realized that there is an importance of sports in general, in building physique, in building positive attitude, sharpening skills and overall personality development. Youth agreed that they lack proper guidance, proper social and financial support, lack encouragement and opportunities, as main reasons for their wasting time.

State Support

The Ministry of Youth Affairs and Sports was initially set up as Department of Sports in 1982 at the time of organization of IX Asian Games in New Delhi. It became a separate Ministry on 27th May, 2000. Their vision is to provide opportunities for developing the personality of youth so that they may achieve their full potential by involving them in various nation-building activities on the one side, and, "broadbasing" of sports and "achieving excellence" at National and International levels on the other. The mission of the Ministry is to formulate policies aimed at promotion and development of Youth and Sports in the country. To formulate and implement policies and programmes aimed at facilitating the all round development of the personality of youth through sports and community services. To formulate and implement policies and programmes aimed at involving the youth in various nation-building activities.

There are various schemes, like, for building of playground 25% budget by panchayats and 75% by the government can be materialized. But it is not known how many of the panchayats know about it. And since the panchayats hardly has youth representatives, does not call for such demand. Thus it is necessary to make this information disseminate, and mobilize the youth, to build a playground activity involving in the panchayat affairs.

Also there are various grants for creation of sports infrastructure. Like development of play fields, construction of Indoor/ Outdoor Stadia facilities, Swimming pools, Water and Winter Sports infrastructure, Shooting ranges, and additional facilities in the existing Sports projects.

Grants available to rural school for sports equipment and playground. The Nehru Yuva Kendra Sangathan (NYKS) caters to the need of non-student rural youth through youth clubs. Various activities related to youth are covered under this Sangathan. Grants to develop sports facilities in tribal and hilly regions are also mentioned.

In this transition period there has to be a conscious effort to provide new spaces and grounds, use sports as a means of creating equity and brotherhood. And in view of the forthcoming Common wealth game, there is lot of buzz related to sports, it is high time now to motivate youth, and even middle aged to participate in sports, disseminate information, provide coaching facilities, nutrition and scholarships to potential sports person. Have a drive all over, you may never know how many more "Bhudias" are there waiting to be noticed and groomed. ❑

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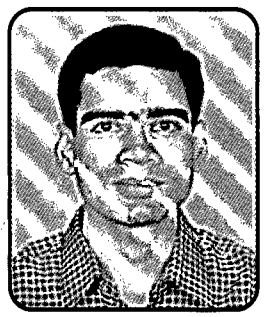
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YE - 11/07/12

Mergers and Acquisitions

Soma Dey
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MERGERS AND Acquisitions (M & A) are most widely prevalent in market-based economies. They are found not only in commodity-producing corporate entities but also in financial services providers, including commercial banks. In recent years, there has been a phenomenal growth of M & A in the economy after the reorganization that the size of a firm is an important matter for business diversification, efficiency and introduction of innovations and creative approaches in conducting business.

Liberalization, privatization and globalization have brought a radical change in the economic environment of the country and have paved the way for competition within the country as well as abroad. In India, both financial services providers and corporate sectors are trying to consolidate their positions by reorganizing and restructuring companies through various strategies i.e. mergers, acquisitions, joint ventures, spin off, divestitures, etc. Indian banks are also ready to keep up with the same line regarding this strategy.

After the introduction of financial sector reforms dramatic changes have been observed in the structure of Indian banking business. Narasimham Committee suggested that financially weak banks should not be allowed to fail and should be merged with financially strong banks. Consequently, failures or continued vulnerabilities and stress in any one commercial bank, however small in size, could well lead to unfavourable perceptions.

The motives behind bank mergers are the following:

- to achieve economies of scale
- to achieve stable asset quality for smaller banks
- to acquire size through the less cumbersome inorganic route to meet competition
- to cut cost through branch and HR replacement and rationalization
- to augment capital base, mainly regulatory capital
- to achieve geographical diversification
- to diversify risk
- to have a wider array of low priced products for customers
- to achieve better technological strengths for greater customer orientation
- to acquire new customer segments
- to enter new business and to achieve access to new data bases
- to take advantage of awareness that a bank is undervalued
- to achieve more rapid growth than by internal effort and greenfield growth
- to satisfy market demand for additional products/services
- to avoid risks of organic start up
- to increase earnings per share
- to reduce dependence on a single product/service
- to acquire market share or position
- to enhance the power and prestige of the owner, CEO or Management
- to increase utilization of present resources

The authors : Senior Research Fellow, Deptt. of Commerce, Univ. of Burdwan and Lecturer, Guskara Mahavidyalaya, Burdwan, West Bengal, respectively.

- to acquire outstanding management or technical personnel
- to eliminate an acquirer's liability on account of tax benefits
- to have a cross-selling of each other's products and services

The idea of Mergers and Acquisitions in Indian Banking is not a recent evolution. In 1921 Imperial Bank of India was formed as an offspring of the merger of three presidency banks – The Bank of Bengal, The Bank of Bombay and The Bank of Madras.

In the 1950s and the 1960s, merger of commercial banks took place under the direction of the Reserve Bank of India. India had 566 commercial banks (of which 474 were non-scheduled) by the end of 1951. The number came down to 292 (with 210 non-scheduled banks by the end of 1961). In the next five years, the number further declined to 100 (27 non-scheduled). By the end of 1969, commercial banks were only 85 (of which 14 were non-scheduled). Simultaneously, the number of bank branches increased from 4151 in 1951 to 9005 in 1969. Between 1961 and 1985 the number of merged banks was equal to 192.

Narasimham Committee had laid down a definite roadmap for bank consolidation in India. Proposed structure of the banking system in India as per Narasimham Committee Report -II is given bellow:

- Three or four large banks (including SBI) which would be international in character.
- Eight to ten national banks with a network of branches throughout the country engaged in universal banking.
- Local banks whose operations would be generally confined to a specific region and
- Rural banks (including RRBs) which would be confined to the rural areas and predominantly engaged in the financing of agriculture/allied activities.

Legal Framework

The procedure for amalgamation of public sector banks is not the same as that of private sector banks. The scheme prepared by RBI need the approval of the two Houses of Parliament.

Legal Framework for Private Sector Banks:

Banking Regulation Act, 1949 has provided procedures and schemes for amalgamation and reconstruction of banking companies. Since, the banking business is incorporated as a company under the Companies Act, the provisions of both (the Companies Act and Banking Regulation Act) will apply.

(1) According to section five of Banking Regulation (BR) Act, 1949:

a) The provisions of the BR Act override the provisions of those contained in the memorandum and articles of a company [section 5(A)].

b) The provisions of BR Act will also cover a foreign registered company carrying on banking business in India [section 5(d)].

c) A resolution, passed by the banking company in general meeting or by its Board of Directors or executed any agreement, is not valid if it is inconsistent with the provisions of the Banking Regulation Act.

(2) The Reserve Bank of India has discretionary powers to approve the voluntary amalgamation of two banking companies under the provisions of Section 44 (A) of the Banking Regulation Act, 1949.

(3) If a compromise or agreement sanctioned by a court in respect of the banking company is not satisfactorily worked out with or without modifications, in the opinion of the Reserve Bank, under section 38(3)(b)(i) of the Banking Regulation Act, the Reserve Bank can propose the winding up of a banking company.

Legal Framework for Public Sector Banks:

As public sector banks namely State Bank of India and its subsidiaries, other nationalized banks and regional rural banks are set up by special status, rules and regulations; power, functions and management of these banks are vested with their respective rules.

State Bank of India and its Subsidiaries

SBI was established under section three of the State Bank of India Act 1955. Majority of shares are held by the Reserve Bank of India. For acquisition of business of other banks, approvals of RBI and the Central Government are essential.

Nationalized Banks

Nationalized banks are established under the Bank Nationalized Acts viz, Banking

Companies (Acquisition and Transfer of Undertakings) Act, 1970 and Banking Companies (Acquisition and Transfer of Undertakings) Act, 1980. Originally, the entire paid-up capital of the nationalized banks was held by the Central Government. As nationalized banks act as agents of the Reserve Bank, undertakings of banking business of the Central Government entrusted on reserve Bank of India. The scheme framed by the Central Government is required to be placed before the two Houses of Parliament under Section 9(6) of the Nationalized Act.

Regional Rural Banks

For amalgamation of two RRBs, empowerment of the Central Government, in consultation with the NABARD, concerned State Government and sponsored bank under section 23(A) of the RRBs Act, 1976 is necessary after issuing notification in the Official Gazette with liabilities, duties and obligations specified in the notification. In the case of amalgamation of nationalized bank under section 9(2) of the Nationalization Act, every notification under this section requires approval of both the Houses of Parliament.

In the case of a nationalized distressed banks and having been placed under the order of moratorium, on an application made by the Reserve Bank to the Central Government under sub-section (2) of Section 45 of the Act, the Reserve Bank can frame a scheme of amalgamation for transferring the assets and liabilities of the distressed bank to a much better and stronger bank after issuing notification in the Official Gazette and getting sanction of the central Government.

Amalgamation of Non-Banking Finance Company with Banking Company

For amalgamation of a non-banking finance company (NBFC) with a banking company, the banking company should obtain the approval of the Reserve Bank of India after its Board approves the scheme of amalgamation but before submission of it to the High Court for approval.

Though there are definitely certain advantages emanating from synergy on merger, but there are also some disadvantages from the mergers of banks. They are as follows:

a) Banking is not an ordinary production activity. It is a highly diversified enterprise, which is differentiated by activities in which different customers engaged, always face different types and degrees of risk and different strategies are open before them. So, an increase in the size of the bank does not lead always to better division of labour and hence reduction of costs.

b) Bank employees argue that mergers will destroy the regional flavours that the banks enjoy which adversely affects the institutions involved in the merger.

c) There is no long-run empirical evidence that bigger size automatically results in lower costs for banks.

d) Most serious problem with mergers in Indian banking is caused by higher level of concentration. Fewer banks, less competitive and greater pressure to generate quicker profits results in an escalation in the cost of credit, which in turn, adversely affects retail as well as wholesale customers. The tendency of focusing on larger urban corporate borrowers and avoiding the spread of their credit portfolio among a number of small borrowers will create bad result for small borrowers. As a result, service quality will suffer, fees will rise and problem of low credit availability for small and medium enterprise will worsen.

Therefore, the lessons which Indian banks should learn from these disadvantages before embarking upon unbridled mergers are: (a) tighten risk management, (b) improve human resources, (c) focus on Customer Relationship Management (CRM), (d) design rewards and punishment intelligently, (e) put proper internal control and (f) introduce transparency practices. ❑

(Email : sani-2india@yahoo.co.in)

Dear Readers,

Banking is an important sector of our economy. It was our endeavour to bring to you the crucial issues through the series on 'Banking' launched in July this year. With this article, we conclude this series. Thank you for the overwhelming response. We will appreciate your feedback. Yojana will keep bringing to you such series from time to time on important issues and topics that touch our lives.

– Chief Editor

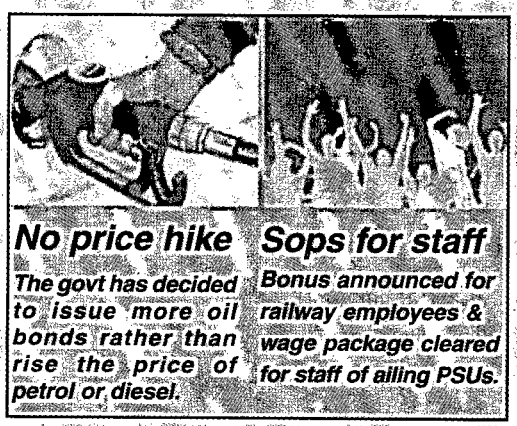
NEW R&R POLICY FOR THE DISPLACED AND DEVELOPERS

The UPA Governemnt approved the much-awaited National Policy on Rehabilitation & Resettlement (R&R), cleared a productivity linked bonus for railway staff and decided not to increase retail price of petrol or diesel. It also extended the subsidy on LPG and kerosene for another three years.

The R&R policy gives landholders the option of taking 20% of the rehabilitation grant as shares in the projects that displaced them. It also eases the rules for buying land by corporate India by amending the Land Acquisition Act of 1894. This has expanded the definition of public purpose to mean companies, too.

The policy comes in the wake of several violent protests, including those at Nandigram in West Bengal, against forcible land acquisition for industrial projects. The policy, replacing the earlier one of 2003, was cleared at a Cabinet meeting chaired by Prime Minister Manmohan Singh.





At least one person from each affected family would get preference for jobs in new projects, subject to vacancies and suitability of the candidate. All dislocated families, including landless ones, will get a house in compensation.

The compensation package specifies that subsequent resale of land must plough back 80% of the net unearned income to the original sellers. The government can also give prior approval for hiking the proportion given as shares to 50% of the grant. To ensure inflation does not erode the benefits, all monetary compensation has been linked to the Consumer Price Index.

A strong grievance redress mechanism has also been prescribed. There will be a National Rehabilitation Commission, while at the district and project levels would be standing R&R committees as well as an ombudsman. The committees will have members from the affected families, voluntary organisations, panchayats and elected representatives.

Highlights

Rehabilitation and Resettlement Policy, 2007

- *National Rehabilitation Commission, ombudsman for grievance redressal and Rehabilitation and Resettlement Committee for each project*
- *Consultation with gram sabhas compulsory*
- *Social Impact Assessment for displacement of 400/200 families in plains/hill areas*
- *Tribal Development Plan for displacement of 200-plus tribal families*
- *If possible, land for land compensation and housing benefits for those who lose house*
- *Option for affected families to take 20%-50% compensation with government approval*
- *Preference in project jobs and one job per nuclear family, support for skill development*
- *Rs 500 monthly pension for destitute, widows, unmarried girls*

Land Acquisition Amendment Bill, 2007

- *Land can be acquired for public purpose. It also includes strategic purposes vital to the state and public infrastructure such as electricity, water supply. However, if land remains unutilised for five years, it will revert to government.*
- *Rate of compensation not to be less than floor price fixed by the state or average of higher prices paid in 50% of land sale cases.*
- *Persons with tenancy rights recognised entity for proportionate share in compensation.*

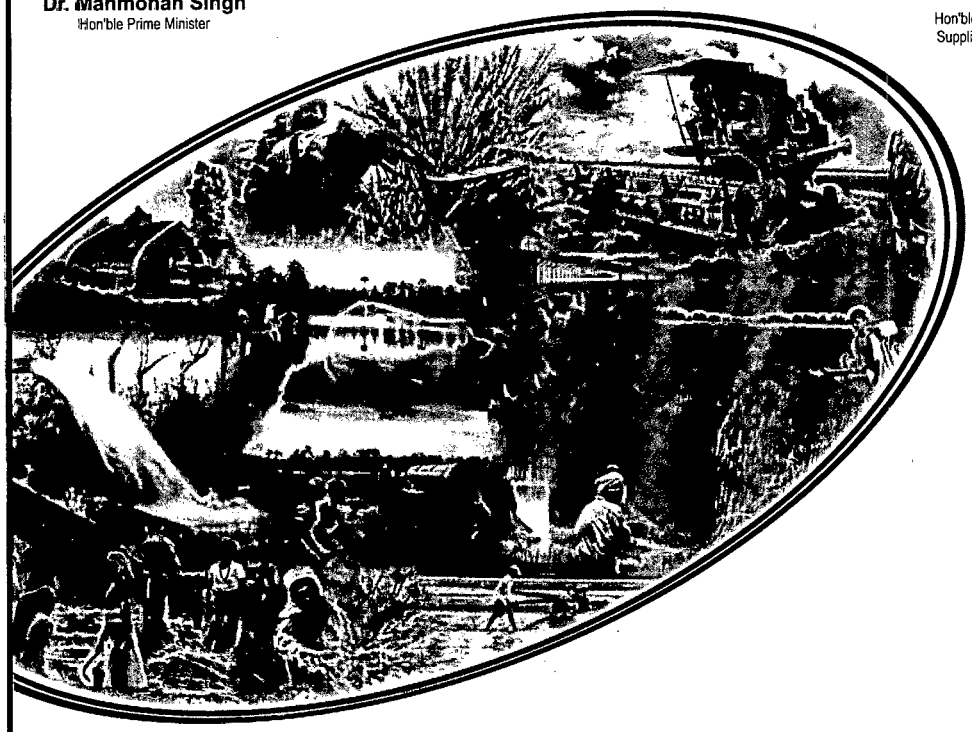


Path Breaking New Programmes To Transform Indian Agriculture



Dr. Manmohan Singh
Hon'ble Prime Minister

Shri Sharad Pawar
Hon'ble Union Minister - Agriculture, Food & Civil Supplies, Consumer Affairs & Public Distribution



National Food Security Mission

- It aims to produce additional 10 million tons of rice, 8 million tons of wheat and 2 million tons of pulses by 2011-12 to meet consumption requirement and ensure food security in the country.
- About 25 million farmers in 305 districts of 16 States in the country are expected to be benefited.
- Some of the areas in which farmers may be eligible to receive financial assistance as per Operational Guidelines of the Mission include :
  - → Better quality seeds.
  - → Farm machinery.
  - → On field water management.
  - → Integrated Pest Management for efficient use of pesticides.
  - → Integrated Nutrient Management to ameliorate soil health.
- Other activities benefiting farmers include :
  - → Demonstration of improved package of practices through large scale field demonstrations.
  - → Organizing Farmers' Field Schools (FFS) for providing extension support.

Rashtriya Krishi Vikas Yojana

- The main objectives of the scheme are :
  - → To incentivise the States for increasing public investment in agriculture and allied sectors.
  - → To ensure that agricultural plans of Districts/States are prepared and are based on agro-climatic conditions, availability of technology and natural resources.
  - → To reduce the yield gap in important crops and increase production and productivity in agriculture and allied sectors through focused and holistic initiatives.
  - → To ensure that local needs/crops/priorities are better reflected in the agricultural plans of the Districts/States.
  - → To provide flexibility and autonomy to States in planning and implementation of agriculture and allied sector schemes.
  - → To maximize income of farmers in agriculture and allied sectors.
- The eligibility for assistance from the Centre under the scheme would depend upon the StateGovernment providing amounts in the Plan Budget of the State for agriculture and allied sectors over the baseline expenditure.

Department of Agriculture & Cooperation
Ministry of Agriculture
Government of India

Prosperous Farmer - Advanced Nation

davp 01101/13/0033/0708

YE - 11/07/08

Financial Performance of Air India

G S Rathore
Pinki Rai

The best way to manage and run the airlines is partial or full privatization and give them full autonomy in their functioning

FINANCE IS the life blood of business. In the present competition it is impossible to escape from finance in one form or another. Finance deals with the arrangement of sufficient amount of capital to achieve the objective of an organization.

In a modern money using economy, finance means, the provision of money at the time it is wanted. In every business, the financial manager has to arrange funds/finance from numerous sources to meet the various financial requirements on appropriate time. Regarding the time element sources of finance in an organization or firm may be broadly classified into. Long term sources and Shorts term sources.

Financing the firm's asset is a very crucial problem among every business enterprise and to solve this problem it is necessary that there is a general mix of debt and equity capital in financing the firm's assets. Finance is required to keep the industrial unit going, for this better financial structure system must be there in an organization. It deals with the revenue and cost analysis and other resultant margins.

Effort has been made to analyze the financial performance of Air India limited. For this purpose following parameters have been taken for the study:

(a) Capital structure (b) Working capital (c) Profitability position (d) Operating performance (e) over all financial performance

Air India has been showing constant upward trend during these three years. It is constant at Rs. 153.84 crore. But reserve and surplus shows an increasing trend in the year 2002-03 is Rs. 328.28 crore and it is increased to R. 399.07 crore

The authors are : Reader and Dean Faculty of Commerce, Udai Pratap Autonomous College, Varanasi (U.P.) and; Research Scholar, in the same College, respectively.

Table 1

Capital Structure (Rs in crore)

Fund	YEAR 2002-03	2003-04	2004-05
Equity Capital	153.84	153.84	153.84
Reserve and Surplus	328.28	345.89	399.07
Net Worth	482.12	499.73	552.91
Long Term Borrowing	2154.72	1475.70	1261.69
Total	**3113.96**	**2475.11**	**2367.51**

in the year 2004-05. Net worth also represents better financial condition of the company. It is Rs. 482.12 crore in the year 2002-03 and increased to Rs. 552.91 crore in the year 2004-05. The next important element is long term borrowing, which shows decreasing trend. In the year 2002-03 it is Rs. 2154.72 crore and decreased to Rs. 1261.69 crore in the year 2004-05 which shows better performance of capital structure of the company. The company has succeeded to improve the position of capital structure in the three years of the study.

Working Capital

The management of working capital is one of the most important aspects of overall financial management. A firm or enterprises must maintain a satisfactory level of working capital. Current assets should be large enough to cover current liabilities. Networking capital may be positive or negative when current assets exceed current liabilities the working capital is positive. Data indicate that working capital is showing negative trend. Total liabilities exceeds total assets in the year 2002-03 it is (Rs. -473.47 crore) in 2003-04 (Rs. -701.62 crore) in 2004-05 (Rs. -561.30 crore).

Profitability Position

Profitability of operations provides the most dependable source of working finance to the business but when a business operate at a profit, then there is little danger of insufficient working capital. The profitability position of a company the shows that the net profit to working capital ratio of Air India is showing tremendous fluctuating trend.

The ratio has varied from minimum of Rs. 129.17 crore to maximum of Rs. 192.85 crore in the period of study. The net profit to net worth ratio is varied from Rs. 174.27 crore to Rs. 277.6 crore . The analysis shows that net profit to net worth ratio shows overall good profit position.

Operating Performance

The operating ratio of Air India Limited reveals that in this three years, there was an increase in operating revenue in 2004-05 by 26.72 % over 2003-04. The operating expenses were increased by 23.50% in 2004-05 as compared to 2003-04.

The factors contributing to reduction in expenses are rates and taxes, rent, repairs to aircraft, provision for obsolence, provision for doubtful debts/advance. Thus due to higher increase in operating revenue compared to increase in operating expenses there was an operating profit of Rs. 49.29 crore in 2004-05 compared to operating loss of Rs. 116.26 crore in 2003-04.

Overall Performance

A detailed and careful analysis of the financial position of Air India Limited reveals the fact that as far as efficiency of these organization increased and the company is trying to improve its position year by year, the efficiency of the company is generally directly affected by passenger carrying capacity, operating cost and revenue structure, capital structure, working capital's, position etc. Slight change in any of this parameter shows a multiplier effect in the profit margin position of the enterprise. The year 2004-05 was eventful particularly in view of the fourth consecutive years of net profit by the Air India limited which was achieved despite the continued recession in the Air transport industry. During the year 2004-05 the total revenue of the company consisting of passenger excess baggage, mail, cargo, charter and handling. Miscellaneous revenue was Rs. 76.2999 million as compared to Rs. 62461.5 million for the year 2003-04 representing an increase of' 22.2% the total expenditure of the company likewise was 75,648.5 million as compared to Rs. 62,380.7 million representing an increase of only 21.3%.The profit for the year before tax and after extraordinary item was Rs.501.4 million as compared to Rs. 146.3 million during the year 2003-04 after providing the tax the net profit was Rs. 963.6 million as against Rs.923.3 million during the previous year.

A detailed and careful analysis of the overall financial position of Air India Limited reveal the fact that, company's financial performance is good as it is earning profit for previous four continuous years. Efficiency of the organization is increased and directly affected by operating cost and revenue structure, non operating expenses, passenger carrying capacity etc. if there is any change in this parameters, it effects the financial and profit margin position. Fare structure also plays important role to

Table 2
Over All Performance

(Rs. in crores)

PARTICULAR	2004-05	2003-04
Profit before deprecation & tax	4911.7	4513.9
Extra ordinary items	(150.0)	65.5
Profit before deprecation & tax	4761.7	4579.4
Less: deprecation	4260.3	4433.1
Profit before tax	501.4	146.3
Less: provision for taxation	1.8	13.8
Profit after tax	499.6	132.5
Add: Deferred tax benefit	464.0	790.3
Net Profit	963.6	923.3

Source:- Annual Report of Air India

analyze financial performance. Passenger revenue is the major ingredient of the total revenue earned by the Airlines. Fares are continuously showing a hike since 2000. Increased fares have negative effect on the financial and overall performance of Airlines but Air India Limited tried to control the hike in some previous years. In 2004-05 Air India offerred 55% discount to senior citizens aged 60 years and above on the domestic routes. Special or reduced fares are introduced from time to time during the lean season and when market requirements warrant the same. We look at the future with renewed hope and confidence as the Indian economy is showing robust growth around 8% in the first quarter of 2005-06 and the burgeoning middle class and others have taken to the skies like never before.

Air India should appoint experts to identify the areas which have scope for revamping. The government will also have to strengthen equity basis of this airlines. The board should appoint efficient merchant bankers, to recommend new capital structure to convert a part of reserve into equity, higher the equity base of the company the greater is its loan raising capacity. More importance is given to equity structuring and expand management of airlines should keep appropriate working of finance to meet their obligation. A detailed strategy has to be planned for improving the profitability. It may be observed that in today's stiff competition the Air India Limited must show the sign of good financial management. The best Way to manage and run the airlines is partial or full privatization and give them full autonomy in their functioning. ❑

Some International Studies

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YE - 11/07/02

IN THE NEWS

- The Centre has announced the highest ever hike in the minimum support price (MSP) of wheat for the coming rabi season. It gave an incentive bonus on the support price for kharif, rice and banned the export of non-basmati rice. Substantial hike in support price of barley, gram, masoor, rapeseed, mustard and safflower were also declared. The government also announced a relief package for the sugar industry. The package also includes extending moratorium from two to five years on outstanding term loans. The MSP for wheat has been fixed at Rs 1000 a quintal against Rs 850 a quintal last year.

- The Union Government has decided to extend the National Rural Employment Guarantee Programme to all districts in the country. The programme guarantees 100 days of wage employment to rural house holds.

- Viswanathan Anand regained the World Chess Championship after a gap of seven years.

- Albert Fert of France and Peter Gruenberg of Germany have won the 2007 Nobel Prize in Physics for a discovery that has shrunk the size of hard drives found in computers and other digital devices.

- Mario Capecchi and Oliver Smithies of the United States and Martin Evans of Britain have upon this year's Nobel Prize for Medicine for their work on stem cells. ❑

OECD Report - Need for more Reforms

The Organisation for Economic Cooperation & Development (OECD) said furtherreforms in labour, financial sector and infrastructure were needed to sustain India's growth momentum. The report by the group of 30 nations joined other multilateral agencies to predict that India's economy would continue growing at over at 8% in 2008.

Top Indian officials said they were well aware of the problems, "We welcome their value addition (to the debate)," said finance secretary D Subba Rao, adding that the report "does not say anything different. But says them differently".

The growth projection is, however, lower than RBI's 8.5%. In the first quarter of the current fiscal, according to the Central Statistical Organisation, the economy grew at 9.3%. In last fiscal, it grew at 9.4%.

The OECD report attributed the lower growth projection from last year to the hiking of interest rates by RBI in its efforts to curb inflation. RBI has also hiked the cash reserve ratio, which now stands at 7%.

OECD was bullish on the long-term prospects for India. It said the Indian economy could grow in double digits if the pace of economic reforms continued, "By 2011, India's annual economic growth could reach a sustainable 10%," the report said.

PROGRESS REPORT

Core sector

Infrastructure is over stretched and in short supply; more private participation is needed

Disinvestment

Privatisation of more public firms should resume to help improve productivity and profitability

Sops for SEZs

Care needs to be taken as to the extent of tax concessions that the are granted

Retail FDI

Removal of ban on FDI in retail shops is needed to reduce waste of farm products and lower prices

Tax reforms

Reduction in tax exemption to allow more money to be transferred to fund public services

Banking reforms

Gradual phase-out of state control in public sector banks and scrapping of mandatory lending to specified sectors

Labour reforms

Consolidation of 46 central and 200 state labour laws is key to boosting employment in organized sector

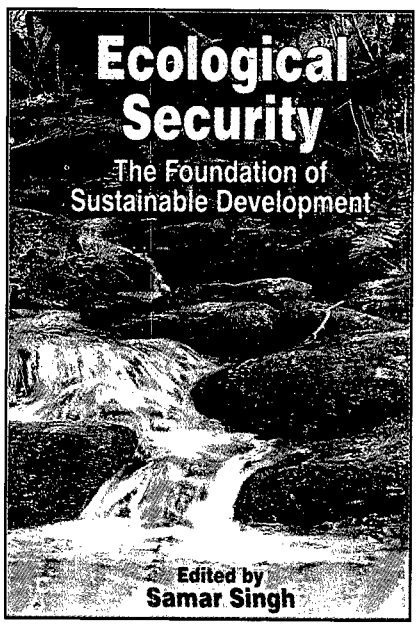
Ownership & policymaking

Public firms should be controlled by a govt investment agency and not ministry to separate ownership and policy-making

Red tape

Red tape still holds back business; states need to become much better organised

Earth Matters



TITLE	:	ECOLOGICAL SECURITY: THE FOUNDATION OF SUSTAINABLE DEVELOPMENT
Author	:	Samar Singh
Pages	:	208
Price	:	Rs. 495/-
Publisher	:	Shipra Publications for India International Centre, New Delhi

IN DEVELOPMENT discourse the issue that crops up for polemical points indubitably centre around the role of environment and the life support system that it bolsters for preserving the planet's capacity to sustain and rejuvenate. It is common knowledge that in the name of development, the pristine purity of the earth is getting eroded day by day because of the all-encompassing economic activity that has but one motive of ensuring growth without ensuring the requisite desideratum of growth to what end? No doubt, advanced countries have progressed far ahead of the poor developing countries in the past in terms of extracting and wresting the optimal results out of the planet, Now, unfortunately, it falls on the lot of developing countries to see that they do not pursue similar planet destroying development strategies that not only put into jeopardy their natural resource endowments but also subject their poor and tribal population in certain pockets to displacement and countless miseries.

The book under review is an apt response to the dilemma confronting developing countries as they go ahead in their relentless march to banish poverty and ill-health in their midst. The book weighs the pros and cons of development strategies and put the issue in proper perspective. If in the name of development, countries of continental size like ours would resort to over-exploitation of their resources such as water, forest produce, flora and fauna, this would tantamount to self-destructing proclivity for the long-term health and wealth of their population.

The retired officer from Indian Administrative Service, Mrs. Samar Singh took the initiative to bring together eminent public figures to set forth their views on ecological security and the need to conserve the gift of nature so abundantly bestowed on humankind. The very first piece by Dr. Amrita Patil, Chairman Foundation for Ecological Security and National Dairy Development Board makes a forcible plea for the need to factor environmental considerations in development strategies. Rightly she defines ecological security as "maintaining the natural integrity, and in a state of stability, as far as present circumstances can possibly permit, the optimum functioning of the vital processes of Nature's Biological Systems that sustain the myriad life forms". In Ms. Patil's definition of life forms cover plant and animal, both micro and macro, which through their symbiotic relationship, complementary interaction and adaptation to their abiotic

environment over millions of years, have thus far supported the evolution of all life on earth, and not the least human. "It is in this matrix of interlocking biotic and abiotic forms, in their totality, that constitutes the critical biological foundations of life on earth".

She rightly regrets overuse and exhaustion of water bodies, forests, productive fishing streams and rivers and once rich pastures which were once, some still are in places, governed by communities whose rules of access allowed rational and renewable use of the living natural bounties. This trend has resulted in "a growing struggle over the commons where the power of money, both foreign and Indian, prevails regardless of the consequences to those unable to protect themselves, much less their rights". To compound the woes, "we are being swept off our cultural bearings by the tidal wave of today's modes of market economy which promotes crass and totally unsustainable consumerism that is wrecking our ecology and progressively our economy", Ms. Patil bemoans. Pleading passionately for an alternative and sustainable development entailing primarily ethical shifts, she asserts "they are a shift in values such that Nature is valued in herself, for heir life support functions, not merely for how she can be converted into resources, raw materials and commodities to feed the engine of economic growth".

Ms. Patel pleads for ecological security by reverting to our roots and desisting from plunging headlong into mindless exploitation of nature to splurge on our conspicuous consumption. But, the Minister of State for Commerce Mr. Jairam Ramesh has in his paper cautioned against turning the environment/ ecological security into an instrument of protectionism. He remarks that if ecological security is going to be used as a criteria for restricting market access and for actually making free trade un-free, then we would be denying to many countries the benefits of the globalisation process. He rightly argues that the ecological security really is a matter ultimately of domestic policy, economic policy, agriculture policy, of how "you deal with air, water and land".

The book is peppered with wise words of wisdom emanating from experts on environment, development and religion to drive home the truth that eventually the clincher is 'simple living and high thinking'. It is in our interests and in the interests of our succeeding generation that we do not denude Nature by our reckless living of today as it is fraught with regrettable years for posterity. We owe a duty to posterity, as we were the beneficiaries of our ancestors in that they showed the way for living without ravaging the ravishing beauty of earth and the pristine purity of Nature in all its many-splendoured glory. ❑

- G. Srinivasan

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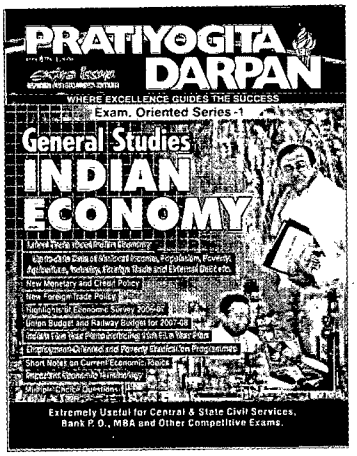
YE - 11/07/05

Printed & Published by Veena Jain, Director, on behalf of Publications Division. Printed at Chandu Press, D-97, Shakarpur, Delhi-110 092 Phone : 22424396, 22526936, and published from Publications Division, Soochna Bhawan, C.G.O Complex, Lodhi Road, New Delhi-110 003.

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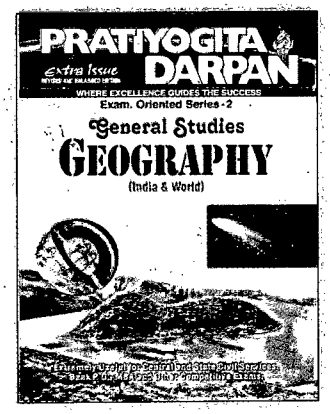
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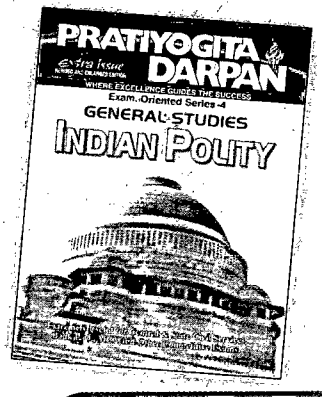
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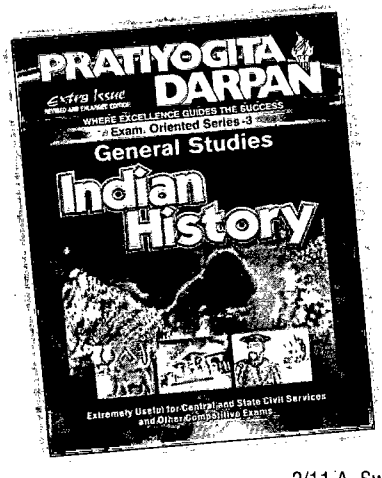


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