Chapter – 5
Indian IT Policy

5.1 Historical Overview of Policy in the Indian IT-ITES Industry

India has managed to achieve formidable brand equity in the international market through its spectacular progress in information technology. It is argued here that India's success in the industry is owed primarily to cumulative investments made by the national Government not only in building a supply base for qualified manpower but also in building institutional infrastructure for capability development. Though the genesis of software development in India can be traced back to the early 1970s, it received the direct attention of the policymakers only in the mid-1980s. This was probably because in the early 1970s, the share of software in the total cost of a computer system was negligible compared with that of the hardware. Also, it was generally held that software and hardware are complementary and therefore separate initiatives are not necessarily called for. Hence, till the mid-1980s, while there were explicit policy announcements towards promoting computer industry in general, there was hardly any specific policy towards software development. The use of computers was confined mostly to a few government departments, private sector units and educational organizations, wherein software programmers were appointed to develop the required software.

The computer policy of 1984, probably for the first time, explicitly acknowledged the importance of software development and underlined the need for institutional and policy support. The policy called for the setting up of a separate Software Development Promotion Agency (SDPA) under the department of electronics, (DoE). Imports of inputs needed for software development were made more liberal. The increase in the production and use of computers as a result of the liberal computer policy enhanced the domestic demand for various software products and services. However, the nascent industry could not meet this increasing demand. As a result, a sizeable proportion of domestic demand had to be met through imports. At the same time, the rapid growth of global demand for
software pointed to the increasing export potential. This in turn called for more concrete policies for the promotion of software development and export. Accordingly, in 1986, an explicit software policy was announced and software was identified as one of the key sectors on India's agenda for export promotion. The policy underlined the importance of integrated export market (Gol 1986). To facilitate the stated objectives, policy emphasized the need for simplifying procedures and provides various incentives such as tax holidays, tax exemption on income from software exports, export subsidies and duty-free import of hardware and software.

With the initiation of economic reforms in the early 1990s, there have been a number of other policy initiatives that have facilitated the growth of IT. Therefore, a major thrust was consciously given to software exports. Accordingly, new policy measures have been initiated, among which are the following:
(a) the removal of entry barriers against foreign companies;
(b) the removal of restrictions on foreign technology transfers;
(c) the participation of the private sector in policymaking;
(d) provisions to finance software development through equity and venture capital;
(e) measures to make available faster and cheaper data communication facilities; and
(f) the reduction and rationalization of taxes, duties and tariffs (Narayananmurti, 2000).

Recognizing the potential of IT-related industries and software for India's development, the Prime Minister created the National Task force on Information Technology and Software Development (NTITSD) in May 1998 under the chairmanship of the Deputy Chairman, Planning Commission. NTITSD submitted a report outlining a national IT plan comprising 108 recommendations for software and 87 recommendations for hardware (India, NTITSD, 1998). In addition, the government also made certain institutional interventions. Not less than four major national task forces have studied all aspects of IT in the past four years and most of their recommendations have been acted upon by the government. More significantly, chief executives of leading private sector IT companies have been fully involved in the task force. A number of government agencies
involved in different aspects of IT were brought together into an integrated ministry of information technology.

5.2 Policies Related to IT in India

Some key areas of policy related to the IT are:

1. **Industrial Approval Policy** - Industrial licensing has been virtually abolished in Electronics and Information Technology sector except for manufacturing electronic aerospace and defence equipment. There is no reservation for public sector enterprises in the Electronics and Information Technology industry and private sector investment is welcome in every area. Electronics and Information Technology industry can be set up anywhere in the country, subject to clearance from the authorities responsible for control of environmental pollution and local zoning and land use regulations.

2. **Foreign Investment Policy** - A foreign company can start operations in India by registration under the Indian Companies Act 1956. Foreign equity in such companies can be up to 100 per cent. If a joint-venture is signed then it entails the advantages of established contracts, financial support and distribution-marketing network of the Indian partner. Foreign technology is encouraged both through FDI and foreign technology agreements which can be approved by means of automatic route of RBI or otherwise by the government.

3. **Foreign Trade Policy** - In general, electronics and IT products are freely importable except for some defence related items.

4. **SEZ Scheme** - Special Economic Zone (SEZ) is a specifically delineated duty free enclave and is deemed as foreign territory for the purposes of trade operations and duties and tariffs. According to SEZ Rules (2006), notified by the Department of Commerce, in case a SEZ is proposed to be set up exclusively for electronics
hardware and software including ITES, the area shall be 10 hectares or more with a minimum built up processing area 1,00,000 square meters.

5. **Export Promotion Scheme**- Special schemes are available for setting up Export Oriented Units (EOU) in the Electronic/IT sector. These schemes are

- Export Oriented Unit (EOU) scheme.
- Electronic Hardware Technology Park (EHTP) scheme.
- Software Technology Park (STP) scheme.

The software Technology Parks of India (STPI) scheme has played a pivotal in catalyzing the growth of the IT-ITES sector. The tax holidays and various other concessions have helped attract much needed investments in this sector. One of the notable institutional interventions has been establishment of software technology parks (STPs) to provide the necessary infrastructure for software export. The first ones to come into being were those at Pune, Banglore, and Bhubaneswar in August, October, and December in 1990 respectively. In 1991, four more STPs were set up by the DoE at Noida, Gandhinagar, Thiruvanathapuram, and Hyderabad. As of now there are 18 software technology parks in the country and they play a significant role in the software export. STPs are performing well in terms of its contribution to the overall revenue and export of the Indian software industry. ‘As on 31st March 2007, 7543 units were operative out of which 6321 units were actually exporting. The remaining units are at various stages of gestation as the scheme allows three years for companies to start commercial production. There is 43 per cent increase in Software Exports through STPI in the year under review, from Rs 100, 965 crore in 2005-06 to Rs 144,214 crore in 2006-07’ (DIT 2008).

6. **Human Capital Formation Policy**- Investment in human capital is the most important initiative. Many initiatives have taken place at different levels. The National Council for Education Research and Training (NCERT) introduced the National Curriculum Framework School Education in 2000. Major objectives of this framework include the use of computers in the curriculum, enhancing learning opportunities by using
ICT across the curriculum, designing curriculum with inter-disciplinary and cross-disciplinary areas.

5.3 The Special Role of the NASSCOM

To extend India’s global IT-ITES reach, the NASSCOM and industry have taken several initiatives to enhance the availability of and access to suitable talent for IT-ITES in India. These initiatives include:

(a) Special Economic Zones for education
NASSCOM has suggested experimenting with adapting the Special Economic Zone concept (deregulation and removal of restrictions) for education, and creating Special Education Zones. However, long-term steps are required, including much higher government investment in education, major education reform, and better compensation and research grants for teachers/researchers (NASSCOM, 2006).

(b) Memorandum of Understanding with University Grants Commission and All India Council for Technical Education
NASSCOM, in combination with the University Grants Commission (UGC) and the All India Council for Technical Education (AICTE), has signed a Memorandum of Understanding (MoU), to strengthen professional education in meeting increasing demand in the sector through changes in curricula, faculty and infrastructure.

(c) Industry-University Partnerships
NASSCOM in its IT Workforce Development (ITWD) initiative is also working with academia across the country to encourage and facilitate greater industry interaction, share relevant feedback, stay updated on industry developments and giving encouragement to changes in curriculum and teaching.

(d) Certification Program for Frontline Management
Under the NASSCOM’s Executive Development Programme (NEDP), NASSCOM and QAI the leading quality consultancy in India introduced the Certification Program for
Frontline Management in the ITES-BPO sector. The program was launched nationally in five major cities - Delhi, Mumbai, Bangalore, Chennai, and Hyderabad - in 2005 and is being extended to other cities.

(e) National Assessment of Competence (NAC)
NASSCOM has launched the NAC program for potential employees in the BPO segment. NAC is an industry standard assessment and certification program, which ensures the transformation of a “trainable” workforce into an “employable” workforce.

(f) National Skills Registry (NSR)
In dealing with issues such as governance, physical security, business continuity, logical security, safeguarding IP, software change management and personnel security both for employees and clients more effectively, NASSCOM in collaboration with the National Securities Depository Limited (NSDL) introduced the NSR scheme in 2006. This is a national database of employees working in IT/BPO industry in India. This database contains third party verified personal, qualification and career information on IT professionals.

(g) Data Security Council of India (DSCI)
NASSCOM is involved in making the Indian Information Security environment comparable to the world standard. As a part of its trusted sourcing initiative, NASSCOM is in the process of introducing the Data Security Council of India (DSCI), a Self Regulatory Organization (SRO) to establish, popularize, monitor and enforce privacy and data protection standards for the ITeS-BPO segment (NASSCOM, 2007). The Indian Computer Emergency Response team (CERT-In) provides incident prevention and response services under the Department of Information Technology.
5.4 Policy Recommendations for Future

Based on a thorough assessment of the key challenges and constraints to the continued growth of the Indian IT-ITES exports, the Department of Information Technology, Ministry of Communications & IT, Government of India constituted the Task Force in August 2009 which recommended the following policy actions:

(1) Improving the Supply of Suitable Talent

(a) To supplement skills in the existing pool of (unemployable) resources, the government should initiate a nationwide 'finishing school' program. The industry should put together the curriculum and faculty for this.

(b) To enhance the pool of experienced, mid-level managers, that are willing and suitable to work in the IT-ITES sectors, it is suggested that a 'bridge course' be introduced to equip professionals who may not have read for a course in IT (e.g. civil engineers, people with degrees in mathematics and physics etc.), but after having worked for a few years (in their respective fields) want to branch into the IT-ITES field.

(c) To re-orient the education system to make it demand-based with the focus on ensuring employability of graduates through high-quality, relevant, need responsive curriculum and teaching. To initiate a joint academia-industry effort.

(d) Expand capacities at and the number of world-class institutions (e.g., IITs, IIMs, IISc), while ensuring that quality does not suffer. Plans for upgrading the National Institutes of Technology (formerly Regional Engineering Colleges) need to be put on a fast-track. New technologies of pedagogy, such as ICT, broadcasting, etc., must be introduced to provide wider access to high quality education, to overcome the shortage of teachers and to increase capacity.

(e) Decentralize the education sector governance model, increase transparency and ease operational inflexibilities. Also encourage private sector participation in the education sector.

(f) Given the varying standard of different institutes, a common nation-wide benchmark for assessing graduating students is also necessary. A series of such benchmarks need to be created to certify candidates as being suitable for different
levels of jobs, beginning with the entry level. The IT-ITES sector has already begun work on the first such certification (for entry level in the BPO industry), this initiative needs to be supported and institutionalized.

(2) **Building Business and Social Infrastructure**

(a) Strengthen the intra-city road network and public transport infrastructure to decongest existing hubs.

(b) Decentralize the industry beyond existing hubs by developing new townships. Action will need to be taken across various fronts including: master plan development, model financial arrangements, land acquisition and auction, proper re-settlement of displaced persons, aviation and transportation planning, and educational linkages.

(3) **Ensuring Business Friendly Regulatory Environment**

(i) **Continue the Benefits provided under STP Scheme**

(a) Establish a level playing field for the STP and SEZ schemes, by exemption from corporate income tax.

(b) Exemption from corporate income tax for residual years (i.e. corporate tax incentives to continue until the units complete the 10 year tenure) for units registered under STP scheme.

(c) Direct exemption from payment of service tax/ Central Sales Tax for units registered under STP scheme.

(ii) **Strengthen the IP Protection, Data Privacy and Information Security Environment in the Country**

(a) Conclude and implement the amendments to the IT Act.

(b) Regular review and updation of IP Protection Laws, Data Privacy Laws and security environment.

(c) Mandate computerization of police and criminal records, as well as judicial system across the country.

(d) Facilitate a robust mechanism to prevent identity theft and corruption.
(iii) Support SME Segment Growth
(a) Ensure that SMEs can continue to leverage the benefits offered under the STP / SEZ scheme without constraints on where they may be located.
(b) Encourage the use of SME / domestically developed IP in e-governance projects.
(c) Enable increased creation and mobilization of venture capital funds for technology.

(iv) Ensuring adequate access to venture capital
(a) There is an urgent need to stimulate seed and angel-funding for start-ups. We suggest that it stimulate the evolution of a professional seed-funding community, rather than the government itself.
(b) Government must relax constraints on institutional investment in domestic venture funds, starting with institutions, which were earlier allowed venture capital investments.
(c) Government, acting jointly with its counterparts in other countries, should use public resources to facilitate partnerships between Indian and foreign venture funds.

(4) Global Trade Development and Promoting Global Free Trade in Services
(a) Department of Commerce may take up the matter in Bilateral Trade Agreements for Software industry with countries such as France, Germany, Japan, the US and UK for taking full commitment in Mode IV (Presence of Natural Persons) for Market Access and National Treatment, Mutual Recognition of degrees and issue of visas.
(b) Work towards “free trade in services” agreements with the US and UK.

(5) Fostering a sustainable ecosystem for innovation and R&D
(a) To set-up an Advanced Projects Agency (APA) that drives technology research at central and state government level, facilitated through a public-private partnership model, on a scale large enough to make an impact.
(b) To adopt a clustered approach to nurture R&D focused activities and establish special Research and Education Zones (REdZ) that will house world-class research and academic institutes which can attract top global talent and that will pursue innovative projects.

(c) To encourage all science departments and technical education and training institutions to include entrepreneurship and new venture management (including global project management) courses in their curriculum.

(d) Leading technology institutions should be encouraged to setup profit-sharing Enterprise Incubation Units, organized as independent societies, able to hold equity and well connected with the local business community. The functions of such an incubation unit would be to (i) provide advisory services and negotiating support to the client entrepreneurs, (ii) assist in filing patents and protecting commercially valuable intellectual property, (iii) host enterprises at the seed stage with space and other facilities for a short time, (iv) forge links with entrepreneurs, alumni and venture funds.

Apart from the above mentioned policy prescriptions of the Task Force (2009), the IT-BPO sector in India must seriously concentrate on the issue of health hazards of the employees, particularly the psychological and mental disorders which may have strong negative impulse on the long run social sustainability aspect. In this regard they must follow the recommendations made by the World Health Organization (WHO), 2005.

5.5 Recommended Mental Health Policies (WHO, 2005)

Besides physical health problems (like CTD, MSD, vision problems) mental health problems, such as depression, anxiety, substance abuse and stress, are common affecting individuals, their families and co-workers, and the broader community. In addition, they have a direct impact on workplaces through increased absenteeism, reduced productivity, and increased costs. Mental health problems are the result of a complex interplay between biological, psychological, social and environmental factors. Key factors which are responsible for these mental health problems are - workload (both excessive and
insufficient work); lack of participation and control in the workplace; monotonous or unpleasant tasks; role ambiguity or conflict; lack of recognition at work; inequity; poor interpersonal relationships; poor working conditions.

A mental health policy for the workplace can be developed separately, or as part of a broader health and safety policy. Putting the policy in place involves the following steps:

**Step I. Analyzing the mental health issues.** - a comprehensive understanding of issues from various stakeholders derived from a detailed assessment of the situation is required.

**Step II. Developing the policy** -- developing vision statement which should incorporate values and principles underlying the workplace mental health policy of various stakeholders.

**Step III. Developing strategies to implement the policy**- plan to implement strategies should outline the objectives, specific strategies to be used, targets to be achieved and activities to be carried out.

**Step IV. Implementing and evaluating the policy**- generating support, coordinating implementation, training, evaluating the outcomes.

If the aforesaid recommendations, covering strategies to augment growth of Indian ITES-BPO sector are properly implemented on a fast track basis, then this industry can really become the pace-setter to India’s future growth potential achieving its desired targets.