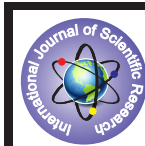


ICT Policy in India in the ERA of Liberalisation: Its Impact and Consequences



Economics

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ABSTRACT

This paper brings out the role of Indian state as an actor in responding to the Information and Communication Technology (ICT) policy with special reference to the two task force reports highlighted in for carrying out this study. Response is here understood as the 'role' played by the Indian state towards putting policy statements into practice. It is strongly believed that ICT will propel India into the league of developed nations. The literature review particularly on technological determinism and social shaping of technology gives an important perspective to explore the objectives of the study. The aim focus of this study is on the responses of different stakeholders especially the state with respect to the ICT policies and discourse. This will reveal developmental concern for the overall built environment especially in education, health, energy and transportation systems sectors, but the structure and orientation of ICT policy initiatives, in a large measure, are directed towards market-oriented demands of globalisation.

1. Introduction

The main objective innovation in technology is to ensure that it provides comfort, leisure, productivity and a better quality of life and built environment to its citizens. All over the world, countries are employing the power of IT in various activities associated with running of the government machinery as well as utilizing in day-to-day life of their citizens. Governments are initiating various policy measures in the field of biotechnology and telecommunications, which would bring change in the production processes and provide citizens means of social cohesion. The resulting informationalism leads to the accumulation of knowledge with higher complexity. Governments everywhere are using the notion of rapid transformations from an industrial to information society for carrying out programmes, which enable them to remain competitive in the era of globalisation. Governments do not provide space for citizens to be part of the discourse. A high power National Task Force on Information Technology and Software Development was set up in 1998. This Task Force prepared the blue print for making the adoption of IT a national movement, by establishing a wide network of empowered taskforce at all governmental and non-governmental levels. In 1999, the Ministry of Information Technology was established by bringing together government agencies involved in different aspects of IT for creating jobs to harness opportunities provided by convergence of communication technologies and to facilitate the use of IT in use of Electronic Governance. Taking into account the increasing convergence between telecommunication and IT a Communication Bill was drafted by the Government of India, followed by the Information Technology Act that was notified and brought into force on 17 October 2000. There has even been a Task Force on Information Technology as a Knowledge Super Power, which considers how India can become a knowledge economy and society.

2. State Approaches to Development and ICT

In any major policy initiative that induces a major social change or transformation, the state normally is expected to play the role of the initiator, mediator, facilitator and arbitrator. The Indian state has played a major role in the context of ICT for development from the early 1980s at various levels. The approach paper to Tenth Five-year Plan has been prepared against a backdrop of high expectations arising from the recent performance of GDP growth. This has improved from an average of about 5.7 per cent in the 1980s to about 6.5 per cent in the Eighth and Ninth Plan period making India one of the ten fastest growing economies and a substantial part of the buoyancy is due to the growth in the services sectors led by ICT and telecommunications. The Tenth Plan stresses the need for defining the development objectives not just in terms of increases in GDP or per capita income but broader parameters, which enhance human well-being.

3. Action Taken on National Task Force Report

The national task force on IT and software development was the first attempt by the state to provide an integrative approach to understand the role IT plays in the national economic and societal development. Unlike other governmental task forces, this Task Force was asked to give recommendations, within the span of three months, on the path of development and economic growth and leveraging the ICT capabilities. The task force formulated 108 recommendations of which 50 were in business, 23 in infrastructure and the rest in development. In the business section, out of 50 recommendations made, 44 were implemented according to the Action Taken Report (ATR). In short, while examining the role of the state in implementing various measures purported to make India a knowledge super power, the Task Force is a good place to start with.

4. ICT and Governance for Development

ICT generates new possibilities to address problems of rural poverty, inequality and environmental degradation. A major impact of e-governance must be felt in the rural areas where the bulk of the Indian population lives so the government has to support initiatives to solve the problems of rural dwellers by using IT. Numbers of projects have been initiated in keeping with India's local needs for application in rural development. For example, the National Dairy Development Board (NDDB) has successfully employed and IT-based machines are used in milk collection centres. This cheap and credible technology was being used in rural cooperatives to measure fat content of milk, test the quality of milk and promptly make payment to the farmers. As a result reduced time for payments and instilled confidence of the farmers in the cooperative set up. Amul cooperative has introduced a number of ICT-based operations, which have contributed to efficiency of milk procurement and distribution. The NDDB has also been able to deal with problems of unethical practices in the milk enterprises.

Land records computerization programme is being implemented as a joint effort of Ministry of Rural Area Employment and NIC. NIC has string of its district centres with additional hardware, software tools, standardized application software, training to offices of state governments enabling the state governments to implement the project. This project is ongoing in 540 districts. Apart from this, the on-line transaction system has been implemented in railway passenger ticket booking system and Indian airlines passenger reservation and departure control system. Railway computerization has been carried out by Software Company CMC, thereby contributing to improved services, reducing waiting time in the reservation queue and unethical practices as well. The State of Andhra Pradesh is now focusing on software and internet to leapfrog the traditional path of development. Chandrababu Naidu, the Former Chief Minister of Andhra Pradesh has been successful in attracting Microsoft, which has set up a software de-

velopment centre, only the second centre outside the United States of America. Oracle and Citibank have set up back room operations in the state. Naidu has facilitated the payment of electricity, water and telephone bills establishing one-step pay counters in Hyderabad.

The State of Karnataka has emerged as a front-runner in the ICT sector, which is regarded as the Indian 'Silicon Valley'. Even though there are major, private institutions in both Hyderabad and Bangalore region, the joint catalytic role, played by both the state and central governments cannot be glossed over. The state has computerized about 600 million land records, and set up *maithis* (information technology kiosks), which provide details of government schemes. Computerized systems have been installed to track poaching and other offences to protect the wildlife in the state forests. The state government also eradicates poverty and helps women through financial self-help groups, which are helped with revolving funds as well as bank credit. The benefits of IT in administration are provided by example of pilot project of Karnataka state to use computer technology in project monitoring in Karwar district, which moved to the third rank from the eighteenth rank towards implementing its development programmes. Afterwards this Computerized Rural Informatics System Project (CRISP) has been expanded to other districts to provide local officials with monitoring system. The Maharashtra has formulated a disaster management plan for improving the administration in the state. For its implementation, the government has set up a statewide Vulnerability Self-Assessment Software Tool (VSAT) network over which a full-fledged communication facility is available. This database will enable district officials to plan better for disaster preparedness and response plans.

5. Salient Features in State-level Success and Failures in ICT Development

Broadly speaking, states fall into two categories the early starters and the late starters. The early starters were states that now have a significant, well-established IT industry; focused on the development of manufacturing and modern services industries and were able to attract investments both from India and abroad. Late starters lag behind in terms of not only having a stable IT industry but also lacked sizable absolute growth in modern industrial and service sectors and in attracting investments both from India and abroad. Early starters having developed IT industry have shown stronger performance in terms of general economic growth and several other development indicators as compared to the late starters. This pattern, however, does not apply uniformly. A state in the early-starter category may still be a moderate performer in such social indicators as literacy and health or rural development. Conversely, a state in the late-starter category may have a strong record in higher education (West Bengal) or literacy and health indicators (Kerala). The states, such as Karnataka and Maharashtra, which were early starters, had no IT policies but the boom in the IT software industry in these states has been driven by the private sector, as a result they have the largest IT industry. On the other hand, Andhra Pradesh, Kerala, and Punjab are emerging as states that strongly emphasize a concerted effort to develop the IT industry with the state government playing a proactive role. Among Indian cities, the largest IT industries are located in Bangalore and Hyderabad, followed by Chennai and Delhi. Bangalore has served as a role model and has attracted a large number of private investors from other states as well as from foreign countries.

ICT and Education

The discourse on knowledge-society education has occupied paramount importance as the prime contributor to the development of a knowledge society. The Information Technology Task Force has come out with 18 recommendations out of the 45 on development with respect to education. Interestingly the ATR notes just two of them as implemented and the rest as ongoing, which includes providing internet access to all schools, colleges, polytechnics, and public hospitals by 2003. Even though an All India Board on Information Technology Education is constituted by All India Council For Technical Edu-

cation (AICTE), it is yet to come out with a model curriculum, which is binding upon institutions. The Chairman of AICTE, Rame Gowda, states that there are a number of challenges brought by liberalisation and globalisation, therefore the need for technical education has to be strong enough to face these challenges, otherwise it will result in failure to compete in world markets thus driving economic ruin to the country. The AICTE by transferring the question of academic quality assurance to universities has abdicated its responsibility for ensuring education quality. In order to halt the brain drain of students to abroad overhauling of our education system to make it market-oriented and on its part the government develops domestic market for ICT-based services which in turn ensure job opportunities for students coming out of institutes of engineering, technology rather than being obsessed by software industry and its export-orientation strategy.

The government has failed to meet the demand for technical educational which has resulted in a rapid growth of private institutions in the IT sector which are unrecognized and generating students, which are being added to ranks of unemployed youths even in the technical sectors. The number of students enrolling for IT courses has slumped due to US slowdown in 2002. On its part government, industry and educational institutions must review and totally revamp IT education in India. Bureaucracy hurdles in universities have to be overcome to ensure substantive changes in the curriculum. Industry can contribute to its role by participating as sponsors and framing the curriculum, providing visiting faculty and hands on training. The IT education has been commercialised e.g., NIIT, APTECH with high fee structure and with their employment oriented qualifications as a result growing number of "Have Not's" who cannot access to computer education is increasing. UGC with AICTE are of view that it is not practical approach to ban their entry but what could be done is to "rationalization" of standards so as to prevent students from being cheated. UGC has come with revised guidelines to facilitate the role of private players in higher education. In this regard the "de novo Institutions" in emerging areas with promises of excellence, are likely to get deemed university status.

The role of social variables i.e. education and health as enabling factors, fostering economic progress has recently received much attention in the development literature. However, the way elementary education has been neglected is striking given the importance provided in contemporary world and its importance for economic development. The development of basic education was significantly more advanced in all the high performing Asian economies with successful growth mediated progress at the time of their economic breakthrough as compared to India. In India by a contrast there has been a remarkable apathy towards expanding elementary and secondary education and certainly 'too little' government action rather than 'too much' is the basic failure of Indian planning in this field, in spite of all the policy initiatives in this regard. The Government must invest heavily on basic education as in view of complementarity between education and effectiveness of economic reforms. By ensuring basic quality improvement, remove barriers against women's education, utilizing of funds for education properly. The government motto of economic liberalization should be accompanied by massive investments in social services.

The scenario of basic education is sad according to S. K. Somaia, Chairman Educational Committee (FICCI). The elementary education must be provided to everyone as only one fifth of the population reaches secondary education; therefore about 80 per cent of country's human capital goes waste. On the other hand, there exists a paradox of country's achievements in nuclear technology, space technology, IT ignoring elementary education that also suffers from lopsided growth if it is analysed on urban-rural trends. The above scenario is further highlighted by government failure to achieve universalisation of elementary education, in spite of Ramamurthy panel recommendations that was put forth by V.P. Singh's government to review the National Policy on Education 1986 brought by Rajiv Gandhi.

Government's concern of providing in computer facilities in state schools seems to have run into major difficulties as there is lack of awareness on part of school administrators about IT usage in the rural areas. Anil Sadgopal, Head of Department Education Faculty, University of Delhi, attributed to sorry conditions of education to anti-people and anti-child education policies rather than the poor implementation of governmental policies. "Knowledge has become patentable commodity in the emerging knowledge society," this has been observed by Prof. R. Govinda, Head School and non-formal education NIEPA.

8. Conclusion

India during the last decade has also embarked an ICT for development in rather big way and sought to transform India into what has been termed as "Knowledge Superpower". IT Taskforce and IT action plan from planning commission and

MIT respectively are the major policy initiatives towards this end. Among the developing countries, even though India has been able to establish considerable ICT national capacity in the context of market-oriented globalisation, the same cannot be said about India's ICT capacity for addressing pressing needs and demands of the underprivileged sections and majority of the people in terms of education, health, energy and transportation systems to name some important sectors are concerned. Even though the exploration of major ICT policy documents and state ICT policy discourse reveal developmental concern for these sectors and mentioned, the structure and orientation of ICT policy initiatives, in a large measure are directed towards market-oriented demands of globalisation. It also emerges from the study that the role of individual state leadership for proactively using ICT for development, also tend to strengthen the system of market economy.

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