

# IV.8

## Opportunities and Risks for India in the Knowledge Society

*B. P. Sanjay*

### INTRODUCTION

There is euphoria in India and the rest of the world because many people are enjoying the benefits of the information society. The visions of Arthur C. Clarke and Marshall McLuhan are invoked to suggest that we are living in a global village. These visions emphasise a great faith in the democratising and equalising potential of new information and communication technologies (ICTs). This contribution considers the risks and opportunities associated with these visions, which portray societies as shifting towards service or knowledge-based economies. This shift is based on the premise that all societies move from being agrarian to industrial to information societies. This may be the case for a few countries, but it is not the case in many countries including India.

### THE INDIAN KNOWLEDGE SOCIETY

The enthusiasm of our policy makers is promoting efforts to create new knowledge societies. This is reflected in an overwhelming focus on strengthening the telecom infrastructure and promoting the use of ICTs in all sectors. The government of India has made five promises to the people: freedom from hunger, development of social structure, development of physical infrastructure, a national water policy and the fulfilment of an information technology mission. The government's goal is to use its agencies to give a boost to the ICT sector. A national task force on ICTs has been established which aims to ensure that all villages are connected by an information superhighway and that every telephone booth becomes a fully-fledged information centre. In May 2000 the government appointed a working group on 'IT for the Masses' with a goal of enabling both the middle classes and the poor to benefit from the opportunities provided by ICTs. The intentions of the central government are shared by many other state governments which are vying with one another to provide incentives to attract investment, which it is hoped, will encourage development initiatives and help to alleviate social and economic problems.

It is important for students of communication and development to reflect upon the last few 'development decades'. The euphoria about the potential of ICTs can be compared to the rising aspirations with respect to initiatives in the past. The industrialisation and urbanisation models embedded in the modernisation

paradigm are examples. The critique of this paradigm by Beltran (1975), Melody (1977), Smythe (1981) and others needs to be invoked to understand the consequences, intended or unintended, of initiatives that are undertaken following this line of reasoning.

The revolutions in India, green and white, are examples that demonstrate the benefits of the application of technology to boost grain and milk production. These examples show that growth that is not accompanied by equity does not lead to the alleviation of problems for the vast majority of people. Alienation from land, marginalisation and migration continue to affect their lives. The Indian people face the dilemma of contending with a plethora of problems and of coping with the demands and pressures of globalisation. Amartya Sen (1998: 8; see also 2000) views the situation in this way:

On balance, there are major gains to be made in globalisation. But if a country has globalisation at the highest possible speed and pays no attention to lack of social opportunity, illiteracy and lack of health care, it is creating problems for itself. In that case the blame lies not with globalisation but with concomitant policies with which it is being married. Globalisation needs to be put in a broader context of social and economic policies.

The Indian government is concerned about the creation of social opportunities but opinions differ as to whether these should result from the application of political will or of the trickle down benefits of the ICT paradigm. The track record of other countries suggests that we should not rely on the trickle down strategy. It is a myth to argue that we have been living in the knowledge society, only in the recent past. All societies have been information or knowledge societies. What has changed significantly is the manner in which the information is collected, stored, processed and disseminated. The information and communication patterns we see today are influenced to a large extent by the advantages that have accrued historically to the former colonial powers. The core-periphery notion or hinterland economic model (Innis 1951; Watkins 1982) helps to understand the role of telegraphy, the railways and other connecting technologies. Questions have been raised by representatives of developing nations about the imbalances and biases in the development of these technologies. Similar questions have been asked about the implications of ICTs for biases in the media.

Notwithstanding the potential biases and risks associated with the patterns of technology development and use in the periphery, increased attention is being

devoted to using new ICTs to solve the problems of developing countries. This thinking influenced policy makers and the then Prime Minister of India, the late Shri Rajiv Gandhi, who incorporated telecom and computing into a mission-oriented strategy for development. This initiative paid some dividends. It is possible for some people (at least) to use world-class communication facilities albeit at a high price. Access is mainly an urban privilege. In the telecom development sector many global partners are involved and the stakes are very high leading to instances of large-scale corruption. A liberalised market model is being promoted together with reforms aimed at setting up regulatory mechanisms, disinvestments of state-owned institutions and the introduction of cost-oriented tariffs.

#### THE CONSEQUENCES AND RISKS

It is important to reflect on the consequences of this shift towards investment in ICTs in light of the fact that many information indicators show that the diffusion and access to ICTs are very low and that high levels of illiteracy and unaffordable services further accentuate this. Some agencies are setting up community media and information centres to address this problem. One state government (Andhra Pradesh) has promoted information kiosks, which enable access to the Internet, but the consequences of these initiatives need to be considered within the context of globalisation. Developing countries, based on their colonial experience, have embraced many of the latter's institutional structures with the consequence that the mode of knowledge production is less relevant to developing countries' requirements. A key feature of emerging knowledge societies is the broadening of production on a spatial basis, a trend that may simply emphasise existing biases in knowledge production and application. India is a paradox because its capacity in many ICT-related production areas is comparatively stronger than in many other developing countries, but much of the research supported by scientific institutions separates the production of new knowledge from its application in the domestic context.

The notion that open science generates knowledge that can be shared through open exchange is changing significantly. There are major questions as to whether India's scientists can access knowledge on an equitable basis as intellectual property rights are extended to new sources of digital information. The present system of knowledge production and dissemination is based on an intellectual property regime with certain disadvantages for the developing world and there are also issues of the extent to which the flows of new knowledge will be policed and regulated to curtail access to some kinds of information by countries like India. There has been a push by Indian stakeholders to ensure that India is part of the new

regimes for intellectual property rights protection that are being negotiated in the World Trade Organization and world intellectual property rights fora, but there are doubts about the consequences of these moves. Pharmaceuticals and biotechnology are significantly affected by this evolving regime. In the pharmaceuticals industry, there are concerns that drug prices may rise to international levels. In the biotechnology industry there are concerns that indigenous knowledge bases will be exploited and that the necessary knowledge base to develop the new 'green gold' resides in scientific laboratories protected by intellectual property rights in the northern industrialised countries. These risks suggest a bleak scenario as a result of the further development of the knowledge society in India as well as globally.

#### THE CONSEQUENCES AND OPPORTUNITIES

Set against these risks are the opportunities created by the availability of ICTs. The information infrastructure can be used to implement sustainable development initiatives. Many poverty alleviation programmes, such as the projects initiated by the M. S. Swaminathan Foundation in Pondicherry to develop educational information villages, are underway. Although these projects are not free from certain structural limitations which make it difficult to expand beyond their current scale of operation and to address some grass roots difficulties, they do provide illustrations of the benefits of ICTs. Mansell and Wehn (1998) emphasise the importance of capacity building strategies embedded in new approaches to education which take advantage of advances in ICTs but which also recognise the value of traditional face-to-face community based learning. In India ICTs have been used to support vocational training, and engineering colleges are being restructured to meet the skill requirements of the ICT sector.

The opportunities seized by the Indian software industry reflect government strategy. When the United States government sought to impose non-tariff barriers on the industry, offshore operations in India gained momentum. Successful companies are competent to work in the global market environment, but the educational opportunities rest with the few despite the rapid dissemination of the Internet and an e-mail culture.

#### CONCLUSION

Many believe that those representing Indian institutions will have the capacity to push for a level playing field on the world scene as far as access to technology and the relevant knowledge bases are concerned at the same time as they foster the development of local knowledge and ICT applications. However, this will depend on other factors such as international trade relations and whether the government

and other stakeholders can avoid becoming victims of the ICT fetish. India's resilient features and strengths in terms of its social organisation, its cultural resources and its vast reservoir of knowledge workers should not be frittered away as a result of greater than necessary participation in the global knowledge society.