



Social development in Indian rural communities: Adoption of telecentres

Siriginidi Subba Rao*

Central Leather Research Institute, Adyar, Chennai 600020, India

ARTICLE INFO

Article history:

Keywords:

Information and communication technologies (ICTs)
Telecentres
Social development
Rural communities
India

ABSTRACT

It is 60 years since India got freedom, but she continues to live in her villages. This paper outlines the problem faced by India in dealing with her rural poor, who constitute about 72.2% of 1027 million and live in 600,000 villages with poor or no infrastructure, and suggests ways to increase their income level. The government must redefine its policies and strategies, and deploy information and communication technologies (ICTs) innovations with application and active participation from development organizations (DOs) to achieve this. This paper highlights the status of ICTs in India and their role in social development, and discusses the case of telecentres, their benefit and overview of current initiatives with select examples. Further, it deals in detail with the sustainability of telecentres and analyses the emerging scenario using Gartner's Hype Cycle. The study concludes that many ICT initiatives in India lack a comprehensive plan in addressing the target population, struggle to sustain due to insufficient infrastructure and are too ambitious as they are not equipped with appropriate technologies in serving the rural communities. To be successful, a telecentre model needs to be built upon the principles of multi-stakeholder partnership involving the government, private organizations and DOs for combining innovation, responsiveness with stability and public participation, and needs to include massive numbers of excluded people into the information world.

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1. Introduction

Information fuels knowledge, and knowledge is widely recognized as the key resource for development. Uneven access to information and limited budgetary resources in several developing countries for creating the necessary infrastructure for increasing access to information shatters the hopes of building a Global Information Society. "India lives in its villages" is as true today as it was when the country got independence 60 years ago. The most pressing problem for the country is still how to deal with its rural poor and how to increase their income level. About 72% of 1 billion plus Indians are living in 600,000 villages with very poor or no infrastructure, pushing the rural community to further backwardness. It would be difficult for the rural development to keep pace with India's current annual population growth of 15.5 million unless the government redefines its policies and strategies, and deploys innovations in information and communication technologies (ICTs) with active participation from development organizations (DOs). The objective of this paper is to provide an overview of the distribution of the Indian population; status of ICTs in India and their role in social development; the case of telecentres and India's select

rural community telecentres; their sustainability and analysis of the emerging scenario using Gartner's Hype Cycle.

2. India in the context

2.1. Population distribution

The rural–urban distribution of population in India and select states is provided in Table 1 (Census of India, 2001). Out of 1027 million populations, 742 million (72.2%) live in the rural areas and 285 million (27.8%) in the urban areas. The rural populace are living in 600,000 villages spread over 2.76 million 0.16km^2 across India with very poor or no infrastructure like roads, transport, power supply, clean drinking water, healthcare, education system, communication network, etc., further pushing them to poverty. According to India's first Social Development Report, a large proportion of Indians are still below the poverty line: 26% or about 260 million (193 million in rural and 67 million in urban areas). Poverty is increasingly concentrated in a few geographical locations and among specific social groups. The incidence of poverty as per 1999–2000 figures—the state of Punjab has the lowest of 6.16%, followed by Haryana at 8.74% and Kerala at 12.72%. Orissa has the highest incidence of poverty of 47.15%, followed by Bihar at 42.60% and Assam at 36.09%. Though poverty levels have shown a decline, there is huge disparity among social classes, with percentage of

* Tel.: +910.16440.1624911389; fax: +910.16440.1624912150.

Table 1
Rural–urban distribution of population—India and select states

India/State/Union Territory*	Population			% Rural population
	Total	Rural	Urban	
India	1,027,015,247	741,660,293	285,354,954	72.22
Jammu and Kashmir	10,069,917	7,564,608	2,505,309	75.12
Punjab	24,289,296	16,043,730	8,245,566	66.05
Delhi*	13,782,976	963,215	12,819,761	6.99
Uttar Pradesh	166,052,859	131,540,230	34,512,629	79.22
Bihar	82,878,796	74,199,596	8,679,200	89.53
Assam	26,638,407	23,248,994	3,389,413	87.28
West Bengal	80,221,171	57,734,690	22,486,481	71.97
Orissa	36,706,920	31,210,602	5,496,318	85.03
Madhya Pradesh	60,385,118	44,282,528	16,102,590	73.33
Maharashtra	96,752,247	55,732,513	41,019,734	57.60
Andhra Pradesh	75,727,541	55,223,944	20,503,597	72.92
Karnataka	52,733,958	34,814,100	17,919,858	66.02
Kerala	31,838,619	23,571,484	8,267,135	74.03
Tamil Nadu	62,110,839	34,869,286	27,241,553	56.14
Pondicherry*	973,829	325,596	648,233	33.43

* Union territories.

poor among Scheduled Tribes being 43, Scheduled Castes 36 and Other Backward Classes 21 (Dhar, 2006).

Agriculture is the most important sector of Indian economy from the perspective of poverty alleviation and employment generation. The sector contributes close to a quarter of India's national income, though the share has decreased from 56.5% in 1950–1951 to 24.3% in 2001–2002. The workforce engaged in agriculture declined from 76% in 1961 to 60% in 2000. The issue of bringing to mainstream is due to lack of four different classes of infrastructure: physical, financial, social and technological. Further, mass poverty is affecting India's ability to compete against countries with better physical infrastructure for connectivity; informed citizenry and more educated population for foreign direct investment, the lack of which has made India face a fiscal deficit. To keep pace with poverty eradication, the government must redefine its policies and strategies dramatically, apply ICTs innovations with application and active participation from DOs that include non-government organizations, community-based organizations, civil society organizations, multi-lateral aid agencies, donor agencies, private sector, etc.

2.2. ICT status

India is emerging as a testing ground for new technologies and business models that aim to narrow the digital divide (i.e. gap in technology (computing and communications) usage and access between urban and rural people in developing economies). Limitations in electricity, telephony, Internet connectivity and other kinds of basic infrastructure in India's rural areas are a key challenge. Although India has a strong and fast-growing information technology (IT) industry, access to ICTs remains very low, particularly in rural areas. The present indicators of IT penetration in Indian society are far from satisfactory. PC penetration is 1.21% (China with 4.08%, Asia at 6.39% and world average at 9.63%). The installed base of computers is more than 13 million (ITU, 2005b). Despite the ongoing deregulation of India's telecommunications sector, its national teledensity is one of the lowest in the world, at 8.44 (China with 49.74, Asia at 33.56 and the world at 46.41) (ITU, 2005a). The Department of Telecommunications, India has set a target teledensity of 22 by 2007 by observing the increasing trend of 11.4 in 2005 due to mobile boom. The current teledensity of rural areas stands at 2 in comparison to that of urban areas at 31 (Singh, 2006). The Internet arrived in India during 1995 for public use through Videsh Sanchar Nigam Limited. The current Internet subscriber base is 3.24%, in sharp con-

trast to Asian countries as Korea with 65.68, Malaysia with 38.62 and China with 7.23% (ITU, 2005b).

2.2.1. ICTs' role in social development

ICTs can play a significant role in combating rural and urban poverty, fostering sustainable development by creating information-rich societies and supporting livelihoods. Successful ICTs intervention relies on an enabled environment, the participation of the private sector and Non-Government Organisations (NGOs), free flow of information, access for women and capacity building. The challenge for governments is to ensure the convergence of their initiatives and those taken up by various DOs, to address the digital divide (Samiullah & Rao, 2002).

A number of innovative experiments already under way indicate that achieving global digital access and reinvigorating development may not be as difficult as many think. About 174 projects in India are using modern ICTs for the benefit of urban and rural citizens. These are initiated by International agencies, private sector, NGOs, Central and State governments and categorized by application/content, e-governance, telecentre, computer-based training/employment, hardware, research/advocacy, etc. (IT for Change, 2006). In the long run, rural ICT projects could prove to be the most effective means of driving changes in rural areas: (i) socially—by ensuring equal access for less privileged groups; (ii) economically—by creating new kinds of work and financial transactions; and (iii) politically—by improving quality, speed and sensitivity of state apparatus to the needs of local citizens. The success of a rural networking initiative depends on how far it progresses down the stages of IT and information diffusion: initiation, adoption, adaptation, acceptance, regulation and infusion.

The National Alliance for Information and Communication Technologies for Basic Human Needs that came into existence during May 2004 conceptualized Mission 2007 (<http://www.mission2007.org/mission>), to tap the potential of ICTs for a holistic development of India, and to facilitate and accelerate, through multi-stakeholder collaborations, the provision of knowledge centres/telecentres in each of India's 600,000 villages by August 15, 2007. The Mission will be top-down in its approach to technological connectivity, but bottom-up in relation to content and knowledge management (KM). These act as centres for knowledge-based livelihoods and income-generation opportunities for poor people, farming communities and all disadvantaged people; support centres for rural entrepreneurship, trading outlet and social empowerment outfit, providing health, education and

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