

**Impact of Information and Communication Technology on
Countryside sponsor**

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ABSTRACT

Technology and agriculture once thought of as very separate realms of experience, are now partners. From small farmers who “tweet” the availability of their “pick – own” crops to dairy farmers who rely on robots their cow, farm operators have discovered that they can benefit immensely from technological aids and ICT. Information and communication technology [ICT] is defined as any technology that facilitates communication, processing and transmission of information in the electronic format. The progress of any market mainly depends on the access to information. ICTs greatly facilitate the flow of information and knowledge by presenting the rural consumers extraordinary opportunities to attain their own entitlements. Institutional advocates of ICTs for development such as the World Bank, suggest that effortlessly available and affluent supplies of information encourage knowledge creation that can stimulate empowerment for the rural consumer. ICTs are the delivery medium for such information supplier. There is a comprehensible relationship between ICTs and rural consumer empowerment.

RURAL INDIA IS IN THE URGENT NEED OF KNOWLEDGE EMPOWERMENT

The challenge before us now is the enlist technology as an ally in the movement for economic, social, and gender equity. ICTs have emerged as a new way of reaching out to the people at grass root level. ICT application into the domain of Indian rural development back to 1986 when the Ministry of Rural Development launched the comprised Rural information system project [CRISTP] in 1986. Under this project, every district in the country was provided with computer and a software called CRISP [Rural soft] to help District Rural Development Agencies [DRDAS] to Manage Ministry of Rural Development programmes more efficiently.

Indian Government has realized the role of the rural development and the contribution of IT in the development of Rural Markets. In recent year’s information and communication, technologies have been deployed in numerous initiatives in rural communities in the country. Many projects underway are using ICT to reduce poverty, overall rural development and promote good governance areas.

1. OBJECTIVES

1. To know various initiatives taken by government and non government agencies.
2. To know various challenges and possible threats to implement ICTs into rural areas.
3. To know future prospects of ICT in rural India.

MAJOR ICT'S INITIATIVES IN INDIA

Despite the huge potential to harness ICT for agricultural and rural development, only a few isolated projects have been initiated in India. Many of these projects were started by NGOs, private organization, cooperatives and Governmental organization. Brief description of some programs run by the Government and NGOs is follows.

WARANAWIREDVILLAGE PROJECT

The prime Minister initiated The Warana “Wired village” project in the year 1998 office I.T. Task Force. The project aims in fact at giving villagers access to information in local language about crops and agricultural market prices, employment schemes from the government of Maharashtra and education opportunities. The project has already increased the efficiency of the sugar cane growing and harvesting process, both in terms of time saved by the farmers on administrative transactions as well as in terms of monetary gains.

AGMARKNET

Is Agricultural marketing information System Network that links all important Agricultural produce market committees [APMC]. State agricultural marketing Boards and Directorate of marketing and inspection [DMI], through this web based information system; farmers now have choice to sell their produce in the nearest market at remunerative prices.

AGRICULTURAL RESOURCES INFORMATION SYSTEM [AGRIS]

Is the central sector scheme for strengthening and promoting Agricultural information system. It develops a comprehensive database on various parameters related to land use, inputs and decision support systems [DSSs] package for strengthening advisory service to farmers. The AGRIS is a step towards establishing a location-specific e- Government model for the poor farmer.

AKSH

Is a fiber optic cable company with its core competence in lay down and maintenance of cable. It has the license to lay down the cable in rural areas. The band width delivered by Aksh supports a large variety of services including video interaction, which will lead to increase the level information exchange in between the people living in several areas of rural India.

GYANDOOT

It was established in year 2000 by the Government of Madhya Pradesh. It is an e-governance based module designed for the rural citizens. It caters the need of the villages by providing the information related to the prevailing rates of the agro-based commodities, income certificate, domicile certificate, caste certificate driving license information regarding rural markets., and rate of land etc.,

AKSHAYA

Is a project of kerala government to extend the benefits of new ICTs to all its citizens. This is part of the Akshaya projects to bring e-Literacy to its people. The project involves setting up around 3000 multipurpose community technology centres called Akshaya e-Kendra across kerala. These e-Kendra 'have the potential to provide G2C,G2Gand C2C,B2B and G2B service and act as decentralized information access hubs and service deliverypoints.

DRISHTEE

Is a commercial organization, which was previously named as Cyber Edge with specific social objectives of targeting to the rural poor built into its vision and strategy. It has the main work of developing the modules for the poor section of the society who cannot understand the international language. Various local language software applications have been developed for e-governance, market price information, buying etc., Drishtee is present in 5 States and is currently available in six districts.

E- COOPERATIVE AND COOPNET

This is an internet enterprise development programme for fostering Agricultural and rural industrial. Rural connectivity is the lifelong of rural economy. This network covers 100% villages and 85% of rural households and occupies a key position in agricultural development with respect to resources use, harvesting of water resources, marketing channel, storage facilities, distribution channel, value addition, market information and a regular monitoring network system.

E-MITA

Is Rajasthan state government started projects in year 2002 to deploy the I.T. enabled benefits, two projects came into existence namely under E-Mitra, LokMitra and Jan Mitra is an integrated electronic platform through which the citizens of Rajasthan can avail the benefits of getting the desired information. Regarding any government department. LokMitra is an urban electronic governance project which was launched in Jaipur city in year 2002, which helps the citizen to pay their bills online land, water, Bus tickets and, leading the citizen to save the waiting time.

E-NRICH

Is another ICT solution that has been developed as a community software solution framework addressing the needs of rural people. Through its customizable local language sensitive interface, e-enrich truly puts ICTs in the hands of its users.

CYAN SANCHAR

It is designed to bring affordable and cost effective service to rural India. It is a partnership project, between BSNL, Government of Madhya Pradesh India and a Canadian business team comprising IBM Business consulting service and Sasktel international. The objectives of this project are to develop a model for sustainable expansion of telecommunication services and ICT application in rural India.

IKISAN PROJECT

Is the ICT initiative of Nagarjun group of companies, the major objectives of ikisan is to provide need based wholly agricultural expertise at villages level, to increase the productivity of selected crops in selected regions.

LAND RECORDS COMPUTERIZATION

The project is a collaborative effort with Ministry of Rural Development providing funds of states for data collection, collation and site preparation etc. The states of Madhya Pradesh, West Bengal, Rengal, Rajasthan, Maharashtra, Orissa, Uttar Pradesh, Sikkim, Andhra Pradesh, and pondicherry are already in an advanced stage of computerization of land record,

LOKVANI

Lokvani is another e- Governance effort initiated by District Administration of Sitapur, Urrar Pradesh in collaboration with NIC.Lokvani provides citizens an opportunity to interact with government without actually visiting the government offices.

N-LOGUE

The main impetus for n- Logue came from the IIT Chennai research group headed by professor Ashok Jhunjhunwala. It follows a franchise model, which provides an info kiosk (personal computer with internet video conferencing facility, a scanner and a photocopier) at a low cost in the rural areas.

PANCHAYATS INFORMATICS

Government of india has also initiated efforts to provide ICT solutions for streamlining the functioning of panchyats to enable easy access to information and services by the common man., through info Gram includes Registration of Birth/Deaths, House Tax, License, certificates (e.g. income, caste etc.), Accounts and panchayat information etc. Info Gram has been implemented in 20 Village panchayats in Goa and some more are likely to be added to the list of implementations.

PARTICIPATOY 3D MODELLING (P3DM)

Participatory 3D modeling (P3DM) was introduced to sasatgre, a village in the west Garo Hills in North Eastern India. P3DM integrates all aspects of the mapping process participatory resource mapping, data collection and model building- as well as application of the model. For decision – making, and for monitoring and evaluating changes in land use.

PROPERTY REGISTRATION

Property Registration systems aims at setting quality and time standards for all registration services.

RURAL BAZAR

Rural bazar is an e-commerce solution developed by NIC to address the marketing needs of the rural producers. The software provides provisions for simple displaying of the products, off-line payment as well as on-line payment. It has been implemented in the states of Tripura, Goa and Tamil Nadu.

RURAL DIGITAL SERVICES

Rural Digital services provide a single window for all government services at village level. In the first phase for the project, the services offered include Birth/Death Registration and Certificates (Caste, Income, window, Unemployment, No Tenancy etc.). The application development allows Biometric Authentication (using Finger print) for login. The software is operational in Karnataka and is currently available in Kannada and English.

RURAL E – SEVA

It was initiated by Andhra Pradesh Government to deliver e – governance facility. The centers are designed with the view to provide better governance facilities to the people of the Rural India. It is related to payment to electricity bills, telephone bills and local governmental bills to provide the benefits at their doorsteps.

RURAL SOFT

It helps capturing monthly progress of various poverty alleviations schemes sponsored by the ministry of Rural Development and State Rural Development Department. The aim of this programme was to facilitate the monitoring and planning exercise in the area of poverty alleviation.

TARAHAAAT

It was developed with the vision to bring internet facility to the rural India. It is franchisee based business model that attempts to generate revenues by focusing the marketing services at local levels. It provides the information in the local language and it provides many services like TABAbazar (for product information), TABAbazar (for providing connectivity), TARAVan (delivery of orders at remote areas), etc.

THE SIMPUTER PROJECT

Scientists from IISc and the Encore software brought this idea into practice. The project grew out of the dire need for an affordable access device for the rural population in the country. The in-built smart card feature enabled the simputer to be shared by a community. Approximate cost has been fixed to half that of the normal PC.

THE UNIVERSAL SERVICE OBLIGATION FUND (USOF)

The Universal service obligation Fund (USOF) of government of India will spend 5000 crore to ensure connectivity in rural areas across the country. USOF had set up 7800 towers for the spread of cellular network. USOF had a fund availability of 14000 crore aimed at increasing the tele density.

CORPORATE INITIATIVES IN BRINGING TECHNOLOGY TO RURAL INDIA

Microsoft, Hewlett-Packard and IBM, apart from other IT companies, are creating technologies specifically for the Indian subcontinent. Putting computers in place is only a small step in a long journey for IT in rural areas. One community computer is simply not sufficient to meet the requirements of villagers. A number of factors are responsible for the digital divide-multiplicity of languages, cultural diversity low literacy rates, price sensitivity, and the low usage of personal computers but technology majors are computer kiosks is an important steps in this direction. They are focusing on ways and means to make IT accessible to common man. There are many initiatives taken by major IT companies in this regards like Indian Telecom Company Bharti Airtel entered into the rural telecom market with the setting up of 4000 Airtel Services Centres (ASCs) in the remotest villages of Maharashtra and Goa telecom circles.

ABharat Sanchar Nigam Ltd offered broadband connections to rural population at a discount rate after showing a strong presence in rural India. Bangalore based Comet Technologies has launched an employment training programme for rural youth. Ericsson IBM's India is working on speech recognition, with aims to provide an easy interface for interacting with computers, particularly for those unfamiliar with computers and/or English. It is extending IBM's Via Voice recognition technology to build a speech recognition system for the Hindi Language. Like HPI is script mail, this will also eliminate the keyboard.

Infosys BPO, the back office of Infosys Technologies Ltd proposes to tie-up with the rural BPOs, besides setting up a separate delivery team of 500 employees to services the local market. Reliance Communication has formed a joint venture with KrishakBhart Cooperative Ltd (Kribhco) for offering value-added services to mobile users in villages.

Microsoft also showed its presence in rural India by setting up different kiosks. Microsoft working at tying in banks, financial institutions and other companies its hold on the rural markets, "Nokia India Launched Nokia life Tools, which are" a range of agriculture, education and entertainment services designed especially for the consumers in small towns and rural areas of the emerging markets".

Last but not least, conceived conceived by ITC in June 2, e-Choupal has already become the largest initiative among all internet – based interventions in rural India. Tata Consultancy services, Tata Teleservices (TTSL), venture in Rotech etc., who are also taking initiative to implement ICTs for betterment of rural infrastructure in the country.

FUTURE PROSPECTS OF INFORMATION AND COMMUNICATION TECHNOLOGY (ICT) IN RURAL INDIA

There is great diversity in local conditions in rural India and the local needs are highly specific. The ICT implementation for rural marketing in India has to face the following challenges:

- Illiteracy - you cannot use much of textual information of the people,
- Middleman – physical distances make it difficult to provide proper price information.
- Alternate media is not available.
- Language – multiplicity and highly specific local languages.

- Easy loans – Reluctance of banks to provide soft loans to farmers.
- Affordability - any new technology must be economical.
- In the absence of timely and correct information about price, arrivals and market trends, compounded with the problems of low cash in hand and proper advice, farmers are forced to sell their produce at lower than expected rates. The result is that the benefits of the green revolutions have not really percolated down to the farmers. There is a need to build partnership with rural clients for a sustainable business relationship and sustainable marketing relationship. There should be a long-term relationship between the firms and farmers for agro business projects, which are risky, long drawn and technical in nature.

2. CONCLUSION

The study helps to prospective researchers to know various initiatives taken by government and corporate which are undergoing a paradigm shift from being a regulatory requirement or a social obligation to being a viable business proposition. Further this study helps to get an insight about the certain issues or rural development with special emphasis on challenges for India to implement the same. This paper attempts to draw attention towards the significance and role of information and communication technology in rural market. The paper examines how the rural consumer and the rural market are benefited by the use of ICT. The development of ICT broad reaching and has soaring visibility. The rapid expansion of information and communication technology will significantly improve the living standard of the rural consumers. Inspire of this, rural consumers have not been able to get the advantage to the extent that urban areas have i.e., the impact of ICT in rural areas is very limited. ICT has remarkable possibility to increase the flow of information there by empowering rural consumers.

Assessing the information needs of the rural consumers is an essential factor in the milieu of ICT for rural market. To make ICT work for the growth of rural market it needs reasonable market-driven infrastructure and dedicated efforts at all levels to help deprived and marginalized consumers use the whole range according to their requirement and demand.

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