



Cover Page



RURAL DEVELOPMENT AND INFORMATION AND COMMUNICATION TECHNOLOGY IN INDIA

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Abstract

Technological changes further compounded the direction of rural development as information and communication technology (ICT) has been thought by communication and development workers as a panacea for other ills that obstructs the development process. It has lead to indiscriminate applications and use of ICT in every aspect of information dissemination, management & governance of development. It will examine the role of complementary reforms in government administration and policies. The focus is chiefly on the rural economy, where the developmental needs are the greatest, and the use of ICTs presents the most challenges. It examines the nature of benefits in areas such as education, health, market efficiency, and democratic participation, the channels through which impacts can be realized, and the practical means for realizing potential benefits, including organizational innovations and government policy as well as structural changes.

Keywords: India, ICTs, Internet, Development.

Introduction

It may seem paradoxical that modern information and communication technologies (ICTs), associated in our minds with developed country markets and capital intensive methods of production, has any relevance for a country where hundreds of millions still lack basic needs. Nevertheless, there are many efforts underway in India and other developing countries to demonstrate the concrete benefits of ICTs for rural populations, and to do so in a manner that makes economic sense.

One of the major components and driving force of rural development is communication. Conventionally, communication includes electronic media, human communication & now information technology (IT). All forms of communications have dominated the development scene in which its persuasive role has been most dominant within the democratic political framework of the country. Persuasive communication for rural development has been given highest priority for bringing about desirable social and behavioral change among the most vulnerable rural poor and women. Initially, the approach lacked gender sensitivity and empathy of the communicators and development agents who came from urban elite homes. Added to these constraints is political will that still influences the pace and progress of rural development.

Current Communication Scenario

The closing decade of twentieth century was the opening of historic information and communication technology interventions for development. This period has witnessed enormous and unprece-dented changes in every aspect of communications technologies, policies, infrastructure development and services. Political leaders of India have begun abandoning archaic government control over communication that has lately moved from government to national and international private players. Finally, airwaves and electronic signals have achieved their freedom from centuries old colonial bondage to reach out and connect people through a privately owned and operated communication network and infrastructure. Both international and national private players have taken a dominant role in redefining, reshaping and providing tele-communication, broadcasting and information services for national development. It has initiated an era of partnership of public and private entrepreneurial skills and abilities to bring about unlimited connectivity. It has already started reshaping the life of a number of elites in India. But what about the rest? Little is known, though there is a trickle down communication effect in many areas of development including rural development. The role of communication technology for development must be viewed in this new and changed environment. How these ICT global and regional changes have influenced the access and use of ICT for development remains an issue of discussion and analysis.

ICT as a Key for Rural Development

Technology plays an important role for developing rural areas. If the productivity increases then the economic growth is increased at a high rate. All the people in the rural areas know about the instruments, materials and price of the product by the use of technology. If people are aware about all the technology they get maximum profit by using them, So that growth of rural development increases rapidly. Technology helps in manufacturing new goods and with the use of new and latest technologies, one can make good



Cover Page



and attractive infrastructure. Now a day's technology changes day by day and its use plays an important role to improve the living and mental status.

Objectives of the Study

1. To understand the ICT and ITC Rural Development in India.
2. To know the communication and Information Technology in India.
3. To assess the Health, Education and Agriculture for Rural Development in India.

Methodology

The present study based on secondary data. The data was collected from books, journals, articles, magazines, news papers and internet etc.,

ICTs, Economics and Development

Static gains are one-time, and come from more efficient use of scarce resources, allowing higher consumption in the present. It is useful to distinguish two kinds of static efficiency gains. One kind pertains to increases in operating efficiency, while the other comes from reduced transaction costs, where the latter can be interpreted broadly to include costs of opportunism and rent-seeking. In both cases, the channel for gains is through more effective and lower cost information storage, processing and communication – the last of these including wider networks and richer information exchange. Dynamic gains come from higher growth, potentially raising the entire future stream of consumption. Reductions in transaction costs can increase growth rates as well as providing static efficiency gains. ICTs can also spur innovation, which is a key factor in economic growth.

Turning to specific impacts, note that digital ICTs involve the electronic processing, storage and communication of information, where anything that can be represented in digital form is included in the term 'information'. Thus news, entertainment, personal communications, educational material, blank and filled-out forms, announcements, schedules, and so on are all information. Software programs that process data (searching, tabulating, and calculating, for example) are also information in this sense, representing a particular kind of intermediate good. We can use standard economic characterizations to classify the different kinds of information.

Information goods typically have the characteristic that one person's use does not reduce their availability for another person. Thus, a message or weather news can be viewed by many people, simultaneously or sequentially. Depending on the content of the news or message, different people may place different valuations on the information. Only friends and relatives may be interested in a personal message, all farmers in a district may be interested in local weather news, and so on. The ability to share information among users can impact the feasibility of providing it on a commercial basis. Digital IT dramatically increases share ability of information, and this affects the economics of private provision of information goods and services: free riding may lead to suboptimal private provision.

ICTs also require new investment, so the benefits of trips, time and paper saved must be weighed against the costs of installing and maintaining the new infrastructure. Yet another significant cost, often more than the infrastructure, is that of training and transition to new work practices. In this case, however, one can argue that there are lasting spillovers through the creation of human and organizational capital. Efficiency benefits of ICTs are not restricted to the communication itself. Information technology (IT) can improve the efficiency of the telephone network, and they can make it possible to track and analyze communications. Word processing, maintaining accounts, inventory management, and other such activities that may not require long-distance communications are also made more efficient by IT. IT also improves the accuracy, updating, irretrievability and backing-up of data required for a range of personal, business and governmental activities.

ITC

ITC stands out among all other initiatives as a large Indian corporation serving global markets. Its kiosks are called e-choupals, and they have several differentiating features. The key distinguishing factor is that the e-choupals are totally designed to support ITC's agricultural products supply chain. In addition, the e-choupals are totally owned and set up by ITC, with the operators not having any investment or risk of their own. Furthermore, e-choupal operators are, because of the focus, always substantial farmers, and therefore always male. All these features make the e-choupals different from the three initiatives discussed earlier. The e-choupal initiative has involved a clear focus and strong direction from the head of ITC's International Business Division. ITC has been able to turn its substantial organizational and managerial capabilities toward this initiative. Management trainees are heavily immersed in the



Cover Page



e-choupal model as part of their inculcation into ITC's workings. There are four kinds of e-choupals, tailored very specifically for four different products: shrimp, coffee, wheat and soybeans. The first two of these involve large commercial farmers, and the focus is on creating Internet access to global market information to guide production and supply decisions. There are a few dozen of these e-choupals. In the case of wheat and soybeans, there are many small farmers, and over 2,000 e-choupals have been set up, in several states of India.

Education: ICTs can enhance the power of experiments such as the Madhya Pradesh case by allowing even greater decentralization, through the use of rural ICT kiosk operators who can act as teachers for smaller educational modules. The role of ICT kiosks is complementary to that of conventional schooling, as well as acting as a substitute. Since there are rural deficits in all the key components of education – teachers, textbooks and interaction – digital material and ICT-based interactions can ameliorate some of these deficits. Even more importantly, the use of ICTs allows for interactive, visually appealing content that appears to greatly enhance student interest, learning and retention. One area where ICT-kiosk based rural education may have a significant role to play is in adult education, ranging from basic literacy to very specific skills for those who have received a conventional school education. The Indian educational system has no institutional mechanisms for adult education, and the quality and scope of vocational or skill-based education are extremely poor. ICT-based education cannot be sufficient for many vocational skills, where hands-on experience is essential, but it can provide training in simple “knowledge economy” tasks such as using spreadsheets for accounting, inventory management and other business processes.

Health: Rather than substituting for medical practitioners through access to digital databases, or improving patient databases, ICTs can improve remote access to medical consultation. For example, video conferencing software can allow for basic health consultations where bringing doctors and rural patients physically together is costly enough to be impossible. While subsequent consultations may well require the rural patient to incur the travel and time costs of going to the urban doctor,40 this might never occur without the barrier to the preliminary consultation being overcome through the use of ICTs. In an intermediate model, rural health providers in Primary Health Centers (PHCs) can use ICTs to combine physical examination with expert consultation with an urban doctor. ICTs may also play a very different role in improving rural health care in India, through the creation of databases and geographic mappings of various health outcomes. This approach can improve the targeting of rural health care delivery. While it does not solve the fundamental problems of incentives in field delivery of services, access to centralized health information databases may enable field providers to improve the quality and targeting of care.

Agriculture: The preliminary evidence from various rural ICT initiatives suggests that ICTs can create an important delivery medium and mechanism for information through the entire range of operations of the developing country farmer. Information can be provided for better input use, cropping decisions, management of pests and diseases, animal husbandry, and marketing. Examples of improving operating efficiency include the use of a web cam and email in an n-Logue kiosk to identify the disease afflicting an okra crop and recommend a remedy, as well as less dramatic cases of information sharing or answering individual farmers' queries. The involvement of agribusiness firms such as EID-Parry and on a much larger scale, ITC, illustrates the benefits that these firms derive from improving their supply chains. These firms derive benefits from improving quality and reliability of yield for their numerous suppliers.

Employment: ICT kiosks can create rural employment, particularly for young people who have some educational qualifications, but not enough to compete effectively for jobs in cities. Alternatively, such individuals may be constrained from moving by high search costs, or, in the case of women, social constraints. ICT kiosks have been demonstrated to provide attractive job opportunities for such people, particularly young women. In addition to direct income and employment generation (which might be relatively small), field interviews suggest that the confidence of these young people is boosted tremendously, and they provide attractive role models for others in rural areas who might consider nontraditional, non-farm rural employment possibilities. Based on these limited interviews, one can speculate that the empowerment effects of the spread of ICTs in rural India are likely to be substantial, though the caveat must be added that poorly functioning kiosks could have a negative effect.

Rural Development: Clearly ICTs cannot alone solve enormous and long-standing problems of poverty and deficits in physical and social infrastructure that contribute to the lack of economic wellbeing. At the same time, the low cost of hardware, and the growing availability of relevant applications make the use of ICTs economically realistic even for developing countries. In fact, in some cases, ICT-based solutions can allow leapfrogging by poor communities, and provide greater marginal value than where relatively strong development has already taken place.

The direct developmental benefits of rural ICTs can be summarized as falling into two classes. First, ICTs can help to reduce transaction costs, and thereby enable more and better quality economic transactions to take place. This includes not only consumption, but also investment-related transactions. In doing so, there can be gains in static efficiency as well as growth. Of course, it is difficult to quantify such impacts, in the absence of controlled experiments. One has to rely on specific examples involving localized improvements in health, education, crop selling price and so on, to document the benefits of access to timelier, higher quality and low cost information than has been the norm in rural India.



Cover Page



Governance and Policy Reform: ICTs have a dual role to play in the case of governance and administrative reform. First, the use of ICTs for improving internal government processes is important, through its potential to increase the efficiency of these processes. For example, the costs can be lowered, and accuracy improved, of data entry for tasks such as the preparation of electoral rolls and lists of welfare eligibility. Second, and perhaps more importantly (because it can hasten the first change), transparency, accountability and responsiveness can all be enhanced by using ICTs to alter the citizen-government interface. This second avenue is particularly relevant in rural areas, where government is both extremely important and also stretched very thin: effective access to government services can be difficult and costly for the average rural citizen.

Conclusion

The primary factor of development is electricity, communication media, transportation etc. The awareness of ICT can increase the interest of people belong to rural areas. Which can increase the productivity and interaction with the current news and market and can sailed agriculture products on market price. Increased the productivity can increased the economical growth of the country. On solving these intension problems we can improve rural areas with high rate. Due to the lack of knowledge and use of ICT in rural areas, development is at a very low rate. Some improvement and advancement in the technologies provided by the government but there is no more effect in the development of rural areas. Information and communication technologies are developing day by day but are less applicable in rural areas. Lack of communication and resources are the cause of undeveloped. Main problem are in rural areas are electricity, communication, transportation and lack of knowledge about new technology. ICT is not being completely implemented by the government and non government organization for rural and urban areas. Electricity is the main hindrance in development.

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