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## INFORMATION COMMUNICATION TECHNOLOGY (ICT) : THE ROLE AND CHALLENGES IN SUSTAINABLE RURAL DEVELOPMENT & GROWTH IN INDIAN CONTEXT



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### ABSTRACT

*The major population of India lives in rural area and earns its live hood by agriculture and allied means of income. Rural India experiences hunger and poverty. In order to meet requirement of eradicating hunger and alleviating poverty in rural areas, and reduce the digital gap between rural and urban areas. Information and Communication Technology (ICT) can be used by developing relevant digital content. This paper introduces the application of ICT for rural development. The paper aims at improving the delivery of information to farmers and other rural dwellers of ICT has been largely supported nowadays by the government, local authorities and NGOs. Paper emphasizes promoting the use of ICT in rural development, by exchanging views on issues of strategic importance to India.*

**1.Introduction:** ICT offers an opportunity to introduce new activities, new services and applications into rural areas or to enhance existing services thus providing a chance to overcome the barriers and bridge the rural-urban divide. The development of the ICT in rural areas will foster development and integration, and increase competitiveness of companies. A region needs a solid foundation for innovation, particularly through an innovation infrastructure with telecommunications and effective use of knowledge. Information Communication Technology ( ICT ) enables increased interconnectivity between knowledge workers and companies through virtual networking.

**2.ICT Defined :** Over the span of last few years, Information Technology has progressed at a remarkable pace. Information technology progress makes computing equipment faster and more powerful. The

convergence of information and communication results in a Information and Communication Technology ( ICT ) can be interpreted broadly as technologies that facilitate communication and the processing of transmission of information by electronic means. This definition encompasses the full range of ICTs, from radio and television to telephones and mobiles, computers and the Internet.

**3.Internet :** Internet is another great achievement of ICT. Internet is one of the technologies available for global resources and information haring. Internet has become a common resource of the whole mankind. Inquiring and sharing information become easier than ever. With Internet, geographical distance and state borders are eliminated. Even a small company now could become multinational . Web can be reached by anybody from anywhere at any time , almost imme-

diately. ICT would revolutionize people's communication, business transaction, and government role (E-Governance). A new era in governments is dawning—the era of E-Government. With ICT, government can serve the public better. Computers and the Internet make it possible for government to contact and transact with lots of people at the same time, respond faster and offer greater convenience. People can get government services from the comfort of their home, or everywhere, all the time. In last few decades information technology is progressing leaps and bounds, which have completely changed the way of life in the developed nations. While Internet has changed the established working practice and opened new vistas and provided a platform to connect, which is interactive gives the opportunity for collaborative workspace that goes beyond the global boundary.

**4. Impact of ICT on Society :** History has seen move from the agricultural society, through the industrialized society and the information society. Society is better informed as result of developments in ICT, for example Touch screens at customer and tourist information offices, Automatic teller machines (ATMs) provide by banks, Information boards, in motorway service stations and railway stations, on-screen help in different languages, in telephone boxes, virtual reality systems, in training and education and entertainment, helps society to great extent. There is impact of the increased availability of information using ICT on a variety of public services, such as: information services like museums, libraries, directory enquiries, emergency services like fire station, the National Health Service, education, public transports etc. ICT have much social significance in daily life and business. The personal Computer (PC) now become indispensable office equipment, communication equipment, learning tool, an entertainment center. The appearance of computers in offices, shops, universities, and even at homes are normal. More and more people use computers to enhance work productivity. ICT demonstrates its power everywhere.

**5. Digital divide :** ICTs threaten to expand the already wide socio-economic gap between urban and rural populations in developing challenges. While simultaneously offering opportunities to reduce it. ICT implementation can be successfully adapted to the

development challenges faced by rural communities and such implementations can be evaluated so that the often unexpected and desirable results that emerge can be revealed and accounted for. Novel approaches to system implementation methodologies for rural development and outcome evaluation that challenge traditional wisdom in the implementation of information systems. But with all these technology adaptation by various developed countries, digital divide is been created due to unbalanced distribution of resources.

**6. E-Governance and Empowerment :** The poverty can be adequately addressed by effective use of e-governance and ICT application environmental management, as their exits linkage between and among poverty, Environment and governance. Improved governance by using ICT can gave direct impact in reducing poverty and improving the environment. Common characteristics of Good Governance are participatory, equitable and inclusive, Transparent, Accountable Responsive, Rule of Law, Consensual In Nature, Effective and Efficient. Good Governance is also related closely to the issue of poverty eradication.

**7. ICT and Agriculture :** Today, Information and Communication Technology ( ICT ) is seen as an important means of achieving a transformation from undeveloped rural area to develop in all respect. ICT is used as a tool for providing local farming communities with scientific knowledge, and information they need. The ICT application in agriculture sector is still very limited in India, and full range of potential benefits that such technology can proved has yet to be realized ICT in particular is not a common feature and is mainly in the area of administration even in the case of larger farms and states.

**8. ICT and Economic Development :** ICT is a vital engine for the development in the 21<sup>st</sup> century. The ICT can be thought a interpersonal communication services for accessing and haring information in rural development and nation reform . Information and Communication Technology has a vital role in connection the rural community to outside world for exchange of information, a basic necessity for economic development. Effective use of ICT can demolish geographical boundaries and can bring rural communities closer to global economic systems and be meaningful help to the underprivileged.

**9. ICT for Poverty alleviation :** In the human development perspective poverty is defined as, “*the denial of opportunities and choices most basic to human needs and forms the core tenet of the rights-based approach to Development where poor people themselves take control and action in their needs*”. ICT s can play a significant role in fighting against rural and urban poverty and fostering sustainable development through creating information rich societies and supporting livelihoods. Appropriately deployed and realized the differential needs of urban and rural people. ICT s can become powerful tools of economic, social and political empowerment. Key to successful ICT interventions is the enabling environment, participation of the private sector and NGOs, free flow of information and access.

**10. Challenges and Issues :** The barriers that currently limit the development of rural areas include Distance barriers: to access to administrative and governmental structures, Economic barriers: to access to wider business and labour markets, Social barriers: to information, education facilities, health and social services. Information barriers: many rural areas and their amenities are undiscovered, unknown for the outer world. As shortages of skills and qualified staff emerge as a major obstacle to innovation. Region should give more attention to lifelong learning to facilitate the assimilation of new technologies for successful implementation of E-rural development. It is necessary to define ICT requirements and issues for rural areas like vision, policy, awareness, technology, infrastructure,

services, applications. It is extremely important to focus on all aspects of rural development. For introduction and implementation of E-rural policy it is necessary to establish cooperation of different sectors of government and on national level to introduce coherent E-Rural policy, establish formal platform, supporting exchange information and knowledge which will join researchers, developers, regional and local government and which could coordinate research and implementation activity and which can also support E-rural policy.

**11. Conclusion:** Modern technologies are expected to enhance economic developments and eradicate poverty especially in developing countries. Efforts are to be applied to strengthen the vision of the need for Information Communication technology (ICT), towards future achievements in the economies and other strategic areas.

ICTs can play a significant role in fighting rural and urban poverty and fostering sustainable development through creating information rich societies and supporting livelihoods. If ICTs are appropriately deployed and realized the differential needs of urban and rural people, ICT can become powerful tools of economic, social and political empowerment. Key to successful ICT interventions is the enabling environment, participation of the private sector and NGOs free flow of information. The challenge for governments is to ensure the convergence of their initiatives and those taken up by NGOs and other organizations and to address the digital divide.

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